

DIST. OF
COLUMBIA
PUBLIC
SCHOOLS
REPORT

1898-99

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REPORT

OF THE

BOARD OF TRUSTEES OF PUBLIC SCHOOLS

OF THE

DISTRICT OF COLUMBIA

TO THE

COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

1898-99.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1900.



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REPORT OF THE BOARD OF TRUSTEES OF PUBLIC SCHOOLS.

WASHINGTON, D. C., *December 29, 1899.*

DEAR SIRS: The board of trustees of the public schools herewith transmit the report of the superintendents, together with those of the director of the high schools and those of the supervising principals and of the heads of the departments of special instruction. As these reports show, and as we have found during the past year, the public schools of the District are in excellent condition. Superintendents and other officials, and the principals and subordinate teachers, have performed their difficult and laborious duties faithfully and well. That the work and the system are absolutely perfect in all respects, we are not prepared to claim, or to expect. We believe that our public schools have kept pace with the advance of modern methods in teaching and in the management of schools. There has been occasionally, here and there, a complaint; possibly having substantial foundation. It would be indeed wonderful if, in so large an institution, involving the services of so many hundreds of teachers and requiring always the exercise of great labor and patience, and great tact and skill, there were not occasionally instances of failure. The trustees, speaking for themselves, and, as they believe, also for the teachers and officials of the schools, invite friendly criticism and suggestion, and are more than willing to cooperate with the public and with the patrons of the schools for the most successful accomplishment of the work to be done.

We repeat our recommendations heretofore made for special favor to the department of manual training. We believe this training to be a part of the process of learning, and that it is an important factor in the foundation of good citizenship. We commend also the recommendations of the superintendent as to the medical inspection of the schools. The large number of children in city schools, and the somewhat abnormal conditions to which they are there subjected, renders such inspection necessary, or at least very desirable, for the best condition of the children and to prevent the spread of contagious diseases. Such inspection might also be the best safeguard against unsanitary conditions in the buildings.

We join in the recommendation of the superintendent as to appropriations for books and other school supplies. Appropriations for this

purpose, though apparently in the aggregate large, still must be considered small, if it be remembered that the amount is less than \$1 for each child.

The constant work of maintenance and repair of buildings is now most satisfactorily organized, and the results justify in all respects the efforts of the board and of the committee in charge of that important matter.

The rapid growth of our school system and the generally high-grade work required of the teaching force will soon compel us to give more attention to the training of our teachers. The normal school as maintained in the Franklin building is an admirable institution so far as its faculty, its organization, and the results are concerned, but it lacks much in equipment. What we now need and soon must have is a normal school building with ample accommodations for the primary practice schools and so fitted as to provide the normal students with such scientific, literary, and physical aids as have been freely given our high schools. Liberal attention to the normal school will bear fruit in thousands of young minds and bodies. The best of teachers will not be too good for the children of this community.

J. W. WHELPLEY, *President.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

REPORT OF SUPERINTENDENT W. B. POWELL.

GENTLEMEN: I have the honor to present herewith, for the year ending June 30, 1899, a report of the management and present condition of the schools of the first eight divisions, and a consolidated statement of the attendance and other important items relating to all the schools under your charge. The last-named statement has been made by uniting facts presented by Superintendent Cook with those of like kind found in my report, being given here for your convenience in getting a general view.

Number of pupils enrolled:

First eight divisions.....	32, 766
Ninth, tenth, and eleventh divisions (colored, city).....	12, 794
Total	45, 560

Number of white pupils (male, 14,649; female, 15,595).....	30, 244
Number of colored pupils (male, 6,736; female, 8,580).....	15, 316
Total (male, 21,385; female, 24,175).....	45, 560

Number of pupils in city schools (white, 26,465; colored, 12,794)	39, 259
Number of pupils in county schools (white, 3,779; colored, 2,522).....	6, 301
Total (white, 30,244; colored, 15,316).....	45, 560

Number of male pupils (white, 14,649; colored, 6,736)	21, 385
Number of female pupils (white, 15,595; colored, 8,580).....	24, 175
Total	45, 560

	Male.	Female.	Total.
Number of pupils in normal schools	14	156	170
Number of pupils in high schools	1, 255	2, 002	3, 257
Number of pupils in grammar and primary schools	19, 769	21, 637	41, 406
Number of pupils in kindergarten schools	347	380	727
Total.....	21, 385	24, 175	45, 560

PER CENT OF TEACHERS.

The per cent of teachers was: White—male, 7.25; female, 59.27; total, 66.52. Colored—male, 6.04; female, 27.44; total, 33.48; distributed as follows:

	White.		Colored.		Total.		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	
Supervisors.....	1.17	0.52	0.80	0.52	1.04	0.52	1.56
Special.....	2.33	6.36	4.12	5.41	2.93	6.04	8.97
Normal schools.....		1.04		1.80		1.29	1.29
High schools.....	4.67	8.82	4.87	2.58	4.75	6.73	11.48
Grammar and primary schools.....	2.72	71.33	8.25	69.59	4.57	70.75	75.32
Kindergartens.....		1.04		2.06		1.38	1.38
Total.....	10.89	89.11	18.04	81.96	13.29	86.71	100.00

ENROLLMENT.

The number of pupils enrolled was 45,560—30,244 white and 15,316 colored. This shows an increase of 862, or 1.92 per cent over the enrollment of the previous year.

The average enrollment was 36,913, or 0.02 per cent above that of the previous year.

The average number of pupils in daily attendance was 34,032.

TEACHERS.

There were employed 1,159 teachers, as follows:

	Male.	Female.	Total.
First eight divisions	101	724	825
Ninth, tenth, and eleventh divisions	54	280	334
Total.....	155	1,004	1,159
Number of white teachers.....	85	685	770
Number of colored teachers	70	319	389
Total.....	155	1,004	1,159
City schools:			
White.....	75	613	688
Colored.....	54	280	334
Total.....	129	893	1,022
County schools:			
White.....	10	72	82
Colored.....	16	39	55
Total.....	26	111	137

The teachers were distributed as follows:

	White.	Colored.	Total.
Supervising principals.....	12	5	17
Normal schools.....	8	7	15
High schools	105	29	134
Grammar schools.....	242	96	338
Primary schools.....	329	206	535
Kindergarten schools	8	8	16
Music	9	5	14
Drawing	6	6	12
Manual training	17	8	25
Cooking	12	5	17
Sewing.....	16	a 10	26
Physical culture	5	4	9
Librarian.....	1		1
Total.....	770	389	1,159

a Including one teacher for the county schools, first eight divisions.

The day schools cost—

For teachers and supervisors	¹ \$801, 016. 26
For janitors	62, 509. 19
For rent	13, 420. 00
For fuel	33, 800. 42
For contingent expenses, including, printing, etc.....	28, 441. 28
For free text-books and supplies	40, 273. 01
For industrial instruction, including manual training, cooking, and sewing	8, 913. 93
For flags	985. 65
For furniture	6, 291. 45
For repairs to buildings.....	49, 915. 32
For repairs to plumbing.....	24, 971. 42
For new buildings	72, 127. 86
For kindergartens (exclusive of salaries).....	6, 187. 57
Total.....	1, 148, 850. 36

The relative numbers enrolled in the different grades of our schools are shown by the following:

Schools.	White.	Colored.
In normal schools	0. 33	0. 46
In high schools	8. 53	4. 43
In grammar schools.....	35. 95	25. 76
In primary schools.....	53. 73	67. 48
In kindergarten schools	1. 46	1. 87
Total	100. 00	100. 00

There were enrolled in the night schools, 1,145 white and 1,384 colored persons. These were taught by 57 teachers, of whom 24 were white and 33 colored.

The night schools cost—

For teachers.....	\$6, 474. 25
For incidental expenses	499. 92
Total	6, 973. 17

The day schools were in session 179½ days; the night schools were open 62 nights in the first eight divisions (night high school 72 nights and the cooking schools 66 nights), and 45 nights in the ninth, tenth, and eleventh divisions.

¹ Includes \$5,130.34 paid teachers of kindergarten schools.

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

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TABLE I.—*Showing attendance and cost of white and colored schools.*

	White.	Colored.	Total.
Whole enrollment:			
Normal schools	100	70	170
High schools	2, 579	678	3, 257
Grammar and primary schools	27, 125	14, 281	41, 406
Kindergarten schools	440	287	727
Total	30, 244	15, 316	45, 560
Increase for the year	933	a 71	862
Per cent of increase	3. 18	a 0. 46	1. 92
Average enrollment:			
Normal schools	98	69	167
High schools	2, 215	586	2, 801
Grammar and primary schools	22, 240	11, 270	33, 510
Kindergarten schools	266	169	435
Total	24, 819	12, 094	36, 913
Increase for the year	401	a 308	93
Per cent of increase	1. 64	a 2. 49	0. 25
Average attendance:			
Normal schools	96	69	165
High schools	2, 035	559	2, 594
Grammar and primary schools	20, 365	10, 528	30, 893
Kindergarten schools	232	148	380
Total	22, 728	11, 304	34, 032
Increase for the year	72	a 423	a 351
Per cent of increase	0. 32	a 3. 60	a 1. 11
Whole enrollment:			
Boys	14, 649	6, 736	21, 385
Girls	15, 595	8, 580	24, 175
Total	30, 244	15, 316	45, 560
Whole enrollment in the night schools	1, 145	1, 384	2, 529
Grand total	31, 389	16, 700	48, 089
School buildings: b			
Owned	60	36	105
Rented	10	4	14
Total	79	40	119
Schoolrooms: b			
Owned	552	282	834
Rented	22	20	42
Total	574	302	876
Number of teachers:			
Males	85	70	155
Females	685	319	1, 004
Total	770	389	1, 159
Night schools	24	33	57
Grand total	794	422	1, 216
Cost of tuition per pupil, including supervision, based on average enrollment			\$21. 70
Cost per pupil for all expenses, except repairs and permanent improvements, based on average enrollment			27. 13

a Decrease.

b Not including high schools.

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

TABLE II.—Whole enrollment of pupils in the several kinds and grades of schools for the school year ending June 30, 1899.

Grade.	White.	Colored.	Total.
Normal schools	100	70	170
High schools	2,579	678	3,257
Total	2,679	748	3,427
Grammar schools, city:	1,922	500	2,422
Eighth grade	2,228	677	2,905
Seventh grade	2,592	924	3,516
Sixth grade	2,867	1,254	4,121
Fifth grade	9,609	3,353	12,964
Total	3,064	1,516	4,580
Primary schools, city:	3,355	1,777	5,132
Fourth grade	3,212	2,050	5,262
Third grade	4,145	3,135	7,280
Second grade	13,776	8,478	22,254
First grade	3,740	2,448	6,188
Total	401	213	614
County schools	39	74	113
Kindergartens:	440	287	727
City	30,244	15,316	45,560
County			
Total			
Grand total			

TABLE III.—Whole enrollment of pupils, boys and girls, white and colored, in the District of Columbia, by grades, for the school year ending June 30, 1899.

Grade.	Boys.	Girls.	Total.	Per cent.
Normal schools	14	156	170	0.37
High schools	1,255	2,002	3,257	7.15
Eighth grade	1,094	1,653	2,747	6.03
Seventh grade	1,363	1,909	3,272	7.18
Sixth grade	1,766	2,225	3,991	8.76
Fifth grade	1,766	2,597	4,363	10.56
Fourth grade	2,212	2,597	4,809	11.80
Third grade	2,547	2,828	5,375	13.29
Second grade	2,895	3,158	6,053	13.85
First grade	3,268	3,042	6,310	19.42
Kindergarten	4,624	4,225	8,849	1.59
Total	347	380	727	100.00
Normal and high schools	21,385	24,175	45,560	7.52
Grammar schools				32.53
Primary schools				58.36
Kindergarten schools				1.59
Total				100.00

SUMMARY.

The number of schools below the high schools was as follows:

Grade.	White.	Colored.	Total.
Grammar schools, city:			
Eighth grade	44	12	56
Seventh grade.....	49	17	66
Sixth grade	57	22	79
Fifth grade	61	27	88
Total.....	211	78	289
Primary schools, city:			
Fourth grade.....	64	32	96
Third grade	70	39	109
Second grade.....	72	46	118
First grade.....	81	66	147
Total.....	287	183	470
County schools.....	82	52	134
Kindergarten schools:			
City	7	6	13
County.....	1	2	3
Grand total ...	588	321	909
Number of whole-day schools	444	181	625
Number of half-day schools	136	132	268
Number of kindergarten schools	8	8	16
Total.....	588	321	909

The average number of pupils, based on the whole enrollment, was as follows:

	White.	Colored.	Total.
High schools (to a teacher, excluding principals).....	25.8	24.2	25.6
Grammar schools, city:			
Eighth grade.....	43.7	41.7	43.2
Seventh grade.....	45.5	39.8	44.0
Sixth grade	45.4	42.0	44.5
Fifth grade.....	47.0	46.8	46.8
Primary schools, city:			
Fourth grade	47.9	47.4	47.7
Third grade	47.9	45.6	47.1
Second grade.....	44.6	44.6	44.6
First grade	51.2	47.5	49.5
County schools	45.6	47.1	46.2
Kindergarten schools:			
City	57.1	35.5	47.2
County	39.0	37.0	37.7

22 PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

One thousand one hundred fifty-nine teachers were employed, as follows:

	White.	Colored.	Total.
Supervising principals.....	12	5	17
Normal schools.....	8	7	15
High schools.....	105	29	134
Total.....	125	41	166
Grammar schools, city:			
Eighth grade.....	44	12	56
Seventh grade.....	49	17	66
Sixth grade.....	57	22	79
Fifth grade.....	60	27	87
Total.....	210	78	288
Primary schools, city:			
Fourth grade.....	62	32	94
Third grade.....	68	36	104
Second grade.....	70	42	112
First grade.....	79	62	141
Total.....	279	172	451
County schools.....	82	52	134
Kindergarten schools:			
City.....	7	6	13
County.....	1	2	3
Total.....	8	8	16
Teachers of music.....	9	5	14
Teachers of drawing.....	6	6	12
Teachers of manual training.....	17	8	25
Teachers of cooking.....	12	5	17
Teachers of sewing.....	16	10	26
Teachers of physical culture.....	5	4	9
Librarian.....	1		1
Grand total.....	770	389	1,159

The cost of schools for supervision and teaching was as follows:

	White.	Colored.	Total.
Supervision:			
1 superintendent.....	\$3,300.00	\$2,250.00	\$5,550.00
8 supervising principals, each \$2,000.....	16,000.00		16,000.00
2 supervising principals, each \$2,000.....		4,000.00	4,000.00
1 supervising principal.....		1,840.00	1,840.00
1 director primary work.....	1,500.00	1,100.00	2,600.00
3 assistant directors primary work.....	2,400.00		2,400.00
1 assistant director primary work.....		650.00	650.00
1 librarian.....	650.00		650.00
1 clerk.....	1,200.00	800.00	2,000.00
1 messenger.....	300.00	200.00	500.00
Total.....	<i>a</i> 25,350.00	<i>b</i> 10,840.00	36,190.00
Cost per pupil, estimated on average enrollment.....	.94	1.06	.98

a First eight divisions.

b Ninth, tenth, and eleventh divisions.

	White.	Colored.	Total.
Tuition:			
Normal schools—			
1 principal	\$1,500.00	\$1,500.00	\$3,000.00
2 teachers, each \$1,200	2,400.00	.....	2,400.00
1 teacher .....	.....	1,000.00	1,000.00
2 teachers, each \$900	1,800.00	.....	1,800.00
2 teachers, each \$800 .....	.....	1,600.00	1,600.00
2 teachers, each \$700	1,400.00	1,400.00	2,800.00
1 teacher	650.00	650.00	1,300.00
Total	<i>a</i> 7,750.00	<i>b</i> 6,150.00	13,900.00
Cost per pupil, estimated on average enrollment	31.19	29.77	30.60
High schools—			
1 director	2,500.00	.....	2,500.00
4 principals	5,800.00	.....	5,800.00
1 principal .....	.....	1,960.00	1,960.00
100 teachers	87,275.00	.....	87,275.00
28 teachers .....	.....	22,304.03	22,304.03
Total	95,575.00	24,264.03	119,839.03
Cost per pupil, estimated on average enrollment	43.15	41.40	42.78
Grammar schools, city—			
44 eighth, 49 seventh, 57 sixth, 61 fifth grade schools	<i>c</i> 174,420.00	.....	174,420.00
12 eighth, 17 seventh, 22 sixth, 27 fifth grade schools .....	.....	62,320.00	62,320.00
Total	174,420.00	62,320.00	236,740.00
Cost per pupil, estimated on average enrollment	21.44	21.62	21.48
Primary schools, city—			
64 fourth, 70 third, 72 second, 81 first grade schools	<i>d</i> 143,239.31	.....	143,239.31
32 fourth, 39 third, 46 second, 66 first grade schools .....	.....	<i>e</i> 89,522.50	89,522.50
Total	143,239.31	89,522.50	232,761.81
Cost per pupil, estimated on average enrollment	13.15	14.36	13.71
Special teachers—			
9 music teachers, 6 drawing teachers, 5 teachers of physical culture	14,542.50	.....	14,542.50
5 music teachers, 6 drawing teachers, 4 teachers of physical culture .....	.....	10,900.00	10,900.00
Total	<i>f</i> 14,542.50	<i>g</i> 10,900.00	25,442.50
Cost per pupil, estimated on average enrollment .....	.59	1.07	.68
Manual training—			
Carpentry, 14; metal working, 2; cooking, 12; sewing, 16	<i>d</i> 31,760.00	.....	31,760.00
Carpentry, 6; metal working, 2; cooking, 5; sewing, 9 .....	.....	<i>g</i> 14,400.00	14,400.00
Total	31,760.00	14,400.00	46,160.00
Cost per pupil, estimated on average enrollment	1.19	1.41	1.25
County schools—			
82 teachers	52,427.08	.....	52,427.08
52 teachers .....	.....	<i>f</i> 31,825.50	31,825.50
Total	52,427.08	31,825.50	84,252.58
Cost per pupil, estimated on average enrollment	17.75	17.02	17.46

a This includes the cost of teaching nine practice schools, first eight divisions, \$4,692.72.

b This includes the cost of teaching nine practice schools, ninth, tenth, and eleventh divisions, \$4,095.99.

c To be increased by the cost of teaching one practice school, \$700.

d To be increased by the cost of teaching eight practice schools, \$3,992.72.

e To be increased by the cost of teaching nine practice schools, \$4,095.99.

f First eight divisions.

g Ninth, tenth, and eleventh divisions.

	White.	Colored.	Total.
<i>Tuition—Continued.</i>			
Kindergarten schools—			
City.....	\$2, 800. 00	\$1, 850. 34	\$4, 650. 34
County.....	360. 00	720. 00	1, 080. 00
Total.....	3, 160. 00	2, 570. 34	5, 730. 34
<i>Cost per pupil, estimated on average enrollment:</i>			
City.....	11. 67	15. 95	13. 06
County.....	13. 85	13. 59	13. 67
Total.....	11. 88	15. 21	13. 17

Summary.

Total cost of instruction, including supervision.....	\$801, 016. 26
Whole number of pupils enrolled.....	45, 560
Average number of pupils enrolled.....	36, 913
Average number of pupils in daily attendance.....	34, 032
Average cost of instruction, including supervision, estimated on—	
1. Whole enrollment.....	\$17. 58
2. Average enrollment.....	21. 70
3. Average daily attendance.....	23. 53

Janitors.

Total amount expended.....	\$62, 509. 19
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Contingent expenses.

Total amount expended.....	\$28, 441. 28
Average amount per pupil (estimated on average enrollment).....	. 77

Free text-books and supplies.

Total amount expended.....	\$40, 273. 01
Average amount per pupil (estimated on average enrollment).....	1. 40

Industrial instruction.

Total amount expended.....	\$8, 913. 93
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Rent.

Total amount expended.....	\$13, 420. 00
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Furniture.

Total amount expended.....	\$6, 291. 45
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Fuel.

Total amount expended.....	\$33, 800. 42
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Flags.

Total amount expended.....	\$985. 65
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Kindergartens.

Total amount expended (exclusive of salaries).....	\$6, 187. 57
Average amount per pupil (estimated on average enrollment).....	14. 22

SUMMARY.

Amount expended, grand total	\$1, 001, 838. 76
Average cost per pupil (including all high and normal schools) for all expenses except repairs and permanent improvements:	
1. On whole enrollment	21. 98
2. On average enrollment	27. 13
3. On average daily attendance.....	29. 43

Supervision.

One superintendent (white).....	\$3, 300. 00
One superintendent (colored)	2, 250. 00
Eight supervising principals (white)	16, 000. 00
Two supervising principals (colored).....	4, 000. 00
One supervising principal (colored)	1, 840. 00
One director primary work (white).....	1, 500. 00
One director primary work (colored)	1, 100. 00
Three assistant directors primary work (white).....	2, 400. 00
One assistant director primary work (colored)	650. 00
One librarian (white)	650. 00
One clerk and secretary (white)	1, 200. 00
One clerk (colored)	800. 00
One messenger (white)	300. 00
One messenger (colored).....	200. 00
Total cost of supervision.....	36, 190. 00
Average cost of supervision per pupil (estimated on average enrollment, 36,913).....	. 98

Normal school (first eight divisions).

Number of teachers trained	99
Average attendance.....	96
Number of teachers employed.....	8
Average salary.....	\$875. 00

Normal school (ninth, tenth, and eleventh divisions).

Number of teachers trained.....	70
Average attendance.....	69
Number of teachers employed.....	7
Average salary.....	\$878. 57

High school (first eight divisions).

Number of pupils enrolled (boys, 1,056; girls, 1,523).....	2, 579
Average enrollment.....	2, 215
Average attendance.....	2, 035
Per cent of attendance.....	93. 0
Average number of cases of tardiness per month.....	451. 1
Number of teachers employed.....	105
Average salary paid.....	\$911. 19
Cost of tuition per pupil (estimated on average enrollment).....	\$43. 15

High school (ninth, tenth, and eleventh divisions).

Number of pupils enrolled (boys, 199; girls, 479)	678
Average enrollment.....	586
Average attendance.....	559
Per cent of attendance.....	95. 3
Average cases of tardiness per month.....	49. 8
Number of teachers employed.....	29
Average salary paid.....	\$836. 68
Cost of tuition per pupil (estimated on average enrollment)	\$41. 40

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

Grammar and primary schools.

	White.	Colored.	Total.
Number of pupils enrolled	27, 125	14, 355	41, 470
Average enrollment	22, 240	11, 323	33, 563
Average attendance	20, 365	10, 577	30, 942
Per cent of attendance	91. 7	93. 4	92. 2
Average number of cases of tardiness per month	2, 718	645	3, 363
Number of pupils dismissed	1	4	5
Number of cases of corporal punishment	19	48	67
Number of teachers employed	571	302	873
Average salary paid	\$647. 78	\$608. 17	\$634. 31
Average number of pupils to a teacher (estimated on average enrollment) ..	38. 9	37. 4	38. 4
Cost of tuition per pupil (estimated on average enrollment)	\$16. 63	\$16. 22	\$16. 50

Kindergarten schools.

	White.	Colored.	Total.
Number of pupils enrolled	440	287	727
Average enrollment	266	169	435
Average daily attendance	232	148	380
Per cent of attendance	86. 3	87. 7	86. 7
Number of teachers employed	8	8	16
Average salary paid	\$395. 00	\$321. 29	\$358. 15
Average number of pupils to a teacher (estimated on average enrollment) ..	33. 2	21. 1	27. 2

Special teachers.

	White. ^a	Colored. ^b	Total.
Music	9	5	14
Drawing	6	6	12
Physical culture	5	4	9
Average salary paid:			
Music	\$668. 89	\$810. 00	\$719. 28
Drawing	768. 75	687. 50	728. 12
Physical culture	782. 00	681. 25	737. 22
Average cost per pupil for special tuition (estimated on average enrollment) ..	. 59	1. 07	. 68

Teachers of manual training.

Carpentry and metal working	17	8	25
Cooking	12	5	17
Sewing	16	c 10	26
Average salary paid:			
Carpentry and metal working	\$875. 29	\$768. 75	\$841. 20
Cooking	608. 75	620. 00	612. 06
Sewing	575. 00	552. 50	566. 35
Average cost per pupil for manual training (estimated on average enrollment) ..	1. 19	1. 41	1. 25

^a First eight divisions.^b Ninth, tenth, and eleventh divisions.^c Includes one teacher in the first eight divisions.

TABLE IV.—*Showing enrollment of colored pupils in the District of Columbia, by grades, for the school year ending June 30, 1899.*

	Whole enrollment.			
	Boys.	Girls.	Total.	Per cent.
Normal school	13	57	70	0.46
High school.....	199	479	678	4.42
Eighth grade	170	415	585	3.82
Seventh grade	271	524	795	5.19
Sixth grade.....	398	667	1,065	6.95
Fifth grade	615	885	1,500	9.80
Fourth grade	786	1,020	1,806	11.79
Third grade	932	1,239	2,171	14.18
Second grade	1,251	1,231	2,482	16.21
First grade	1,972	1,905	3,877	25.31
Kindergarten.....	129	158	287	1.87
Total	6,736	8,580	15,316	100.00
SUMMARY.				
Normal and high schools	212	536	748	4.88
Grammar schools	1,454	2,491	3,945	25.76
Primary schools	4,941	5,395	10,336	67.49
Kindergarten schools	129	158	287	1.87
Total	6,736	8,580	15,316	100.00

Free text-books and supplies.

	Quan- tity.	Cost.		Quan- tity.	Cost.
BOOKS.			BOOKS—continued.		
Æsop's Fables	1,212	\$327.24	Geography—Continued.		
Algebras, Wentworth's School	372	375.10	Africa, Part I	12	\$4.76
Analysis, Swinton's Word	132	34.54	Africa, Part II	12	4.76
Arithmetic:			Australia	1,032	577.92
Advanced, Cook & Cropsey	1,020	616.30	Our Own Country.....	12	5.00
Elements of, Milne	996	268.92	Our American Neighbors .	24	12.00
Intellectual, Davies	312	68.20	Geology.....	180	157.50
Standard, Milne.....	1,380	807.30	Government and Administra- tion, Willoughby.....	168	100.80
Arithmetic reader:			Grammar, Kerl.....	132	79.20
For second grade.....	900	144.00	Hans Andersen's Stories.....	708	236.00
For third grade	1,548	348.30	History:		
Civil Government, Fiske	228	182.40	Barnes	444	177.60
Child's Health Primer	648	174.96	Eggleston.....	24	21.00
Dictionary, comprehensive...	540	513.00	Fiske	444	355.20
Essentials of Health.....	168	127.12	McMaster.....	888	691.16
Evangeline.....	1,116	125.55	Montgomery	612	510.00
Geography:			Ridpath.....	48	3.84
Complete, Fry.....	218	213.75	Story of Two Inaugurations	6,000	102.20
Complete, Redway	2,004	1,943.88	Washington Day by Day..	50	75.00
Elementary, Fry	2,400	1,168.00	Hygiene for Young People....	396	158.40
Primary, Redway	792	395.00	Legend of Sleepy Hollow	1,008	42.00
United States of America, Shaler	1	7.50	Miles Standish.....	840	94.50
Maps, relief	20	480.00	Music:		
Modern Europe	24	11.92	Normal First Reader.....	264	67.76

Free text-books and supplies—Continued.

	Quantity.	Cost.		Quantity.	Cost.
BOOKS—continued.			SUPPLIES—continued.		
Music—Continued.			Paper—Continued.		
Normal Second Reader:			Composition, No. 1 .pkgs..	20,850	\$1,209.36
Part I.....	348	\$104.40	Composition, No. 2 ..do....	23,272	1,349.78
Part II.....	240	64.80	Composition, No. 3 ..do....	27,214	1,578.41
Normal Third Reader.....	12	5.40	Drawing.....reams..	1,800	879.75
Mason Second Reader.....	1,104	368.00	Do.....tablets..	36,011	624.43
Mason Third Reader.....	216	8.64	Examination.....reams..	3,312	2,798.64
Pamphlets.....	456	36.48	Practice.....packages..	45,000	2,430.00
Beginners' Work of Vocal.	97	24.75	Wrapping.....reams..	100	300.00
Old Greek Stories.....	444	156.50	Pencils:		
Our Continent.....	372	232.50	Compass.....gross..	20	26.40
Reader:			Drawing.....do....	525	551.25
Franklin—			"Washington Pub-		
Second.....	204	57.82	lic School".....gross..	2,000	1,800.00
Third.....	1,320	550.00	Penholders.....do....	280	210.00
Fourth.....	864	432.00	Pens.....do....	4,600	1,472.00
Intermediate.....	252	126.00	Pointers, blackboard ..dozen..	20	60.00
Fifth.....	312	209.82	Rope.....		5.86
Normal—			Rubbers:		
Second.....	48	13.84	Blackboard.....dozen..	470	25.00
Third.....	1,500	600.00	Erasers.....pounds..	600	240.00
Fourth.....	2,712	1,356.00	Rulers:		
Fifth.....	372	198.40	Brass edge.....dozen..	200	90.00
Snow Bound.....	480	54.00	Plain edge.....do....	474	142.20
Word and Sentence Book.....	2,748	599.98	Scissors.....do....	460	690.00
Total.....		17,009.91	Squares.....do....	50	32.00
SUPPLIES.			Sundries for busy work.....		42.04
Art forms.....	190	228.00	Twine.....pounds..	10	6.00
Chalk, crayon.....gross..	5,200	416.00	Vases.....	624	260.00
Clay.....barrels..	108	128.26	Wands.....dozen..	12	7.50
Colors.....boxes..	8,460	1,472.40	Wand racks.....pairs..	3	2.70
Do.....cakes..	6,300	189.00	Total.....		22,000.65
Compasses.....gross..	105	26.25	ADDITIONAL EXPENSES.		
Dumbbells.....pairs..	100	35.00	Salary of custodian.....		900.00
Dumbbell hooks.....do....	100	15.00	Hauling and labor.....		262.60
Ink.....quarts..	3,500	350.00	Blank books, printing and		
Measures, liquid.....sets..	50	10.00	binding.....		95.43
Modeling tools.....dozen..	15	13.50	Freight.....		2.42
Models.....boxes..	216	27.00	Hand stamp and ink.....		2.00
Paper:			Total.....		1,262.45
Cardboard.....sheets..	18,250	222.65	Grand total.....		40,273.01
Blocks.....	60,809	1,824.27			

The number of pupils enrolled in the eight grades that were supplied with free books was 41,406, making the cost per pupil for all books and supplies \$0.972, and the cost for books alone \$0.41.

The cost for books was distributed as follows:

Grade.	Number of pupils.	Total cost.	Average cost per pupil.
First	8,849		
Second	6,310	\$612.50	\$0.097
Third	6,053	1,727.46	.285
Fourth	5,375	2,685.84	.500
Fifth	4,809	2,767.70	.575
Sixth	3,991	4,471.57	1.120
Seventh	3,272	3,160.31	.966
Eighth	2,747	1,584.53	.576
Total	41,406	17,009.91	.410

The cost for supplies and miscellaneous items was distributed as follows:

Grade.	Number of pupils.	Total cost.	Average cost per pupil.
First	8,849	\$4,261.17	\$0.481
Second	6,310	3,984.07	.631
Third	6,053	3,210.27	.530
Fourth	5,375	2,850.56	.530
Fifth	4,809	2,928.54	.609
Sixth	3,991	2,451.56	.614
Seventh	3,272	1,951.14	.596
Eighth	2,747	1,625.70	.592
Total	41,406	23,263.10	.562

The cost for books and supplies was distributed as follows:

Grade.	Number of pupils.	Total cost.	Average cost per pupil.
First	8,849	\$4,261.17	\$0.481
Second	6,310	4,596.57	.728
Third	6,053	4,937.73	.815
Fourth	5,275	5,536.40	1.030
Fifth	4,809	5,696.24	1.184
Sixth	3,991	6,923.13	1.734
Seventh	3,272	5,111.45	1.562
Eighth	2,747	3,210.32	1.168
Total	41,406	40,273.01	.972

Table showing the cost of all books and supplies, including miscellaneous expenses, by grades, for each year.

Year.	Num- ber of pupils.	Total cost.	Average cost per pupil.	Year.	Num- ber of pupils.	Total cost.	Average cost per pupil.
FIRST GRADE.				FOURTH GRADE— continued.			
1892.....	8,005	\$5,748.43	\$0.718	1898.....	\$5,426	\$5,485.45	1.010
1893.....	8,076	2,163.90	.268	1899.....	5,375	5,536.40	1.030
1894.....	8,446	3,175.17	.375	FIFTH GRADE.			
1895.....	8,148	3,464.01	.425	1893.....	4,357	9,835.50	2.257
1896.....	8,472	4,254.93	.502	1894.....	4,602	3,037.87	.660
1897.....	8,475	3,889.95	.459	1895.....	4,538	3,966.63	.874
1898.....	8,949	5,573.50	.623	1896.....	4,404	3,008.22	.681
1899.....	8,849	4,261.17	.481	1897.....	4,656	5,165.65	1.109
SECOND GRADE.				1898.....	4,743	4,117.65	.868
1892.....	5,814	3,385.01	.582	1899.....	4,809	5,696.24	1.184
1893.....	5,904	1,883.16	.318	SIXTH GRADE.			
1894.....	6,014	2,738.26	.455	1893.....	3,548	15,407.45	4.342
1895.....	5,921	3,060.98	.517	1894.....	3,598	2,922.79	.815
1896.....	6,099	4,740.98	.779	1895.....	3,945	2,806.37	.711
1897.....	6,196	5,333.27	.859	1896.....	3,900	7,804.70	2.001
1898.....	6,472	6,392.34	.987	1897.....	3,767	4,775.78	1.267
1899.....	6,310	4,596.57	.728	1898.....	4,021	7,223.02	1.796
THIRD GRADE.				1899.....	3,991	6,923.13	1.734
1892.....	5,390	6,480.37	1.202	SEVENTH GRADE.			
1893.....	5,223	2,555.83	.489	1894.....	2,986	15,738.94	5.271
1894.....	5,153	2,651.40	.514	1895.....	3,145	3,735.79	1.208
1895.....	5,608	5,903.89	1.053	1896.....	3,199	4,342.00	1.357
1896.....	5,687	3,857.10	.678	1897.....	3,179	4,263.37	1.341
1897.....	5,808	3,737.62	.643	1898.....	3,163	3,927.03	1.241
1898.....	5,761	4,602.52	.798	1899.....	3,272	5,111.45	1.562
1899.....	6,053	4,937.73	.815	EIGHTH GRADE.			
FOURTH GRADE.				1894.....	2,570	14,594.87	5.678
1892.....	4,877	9,165.19	1.879	1895.....	2,685	3,497.85	1.274
1893.....	5,011	2,549.24	.508	1896.....	2,658	3,229.53	1.211
1894.....	4,776	2,460.98	.515	1897.....	2,731	3,858.04	1.412
1895.....	4,725	3,179.00	.673	1898.....	2,892	2,675.06	.925
1896.....	5,055	3,619.89	.716	1899.....	2,747	3,210.32	1.168
1897.....	5,150	6,840.81	1.328				

Table showing the cost of books, by grade, for each year.

Year.	Num- ber of pupils.	Total cost.	Average cost per pupil.	Year.	Num- ber of pupils.	Total cost.	Average cost per pupil.
FIRST GRADE.				FOURTH GRADE— continued.			
1892.....	8,005	\$3,954.95	\$0.494	1898.....	5,426	\$2,802.37	\$0.516
1893.....	8,076	134.84	.017	1899.....	5,375	2,685.84	.500
1894.....	8,446	501.36	.059	FIFTH GRADE.			
1895.....	8,148	744.94	.091	1893.....	4,657	6,684.67	1.533
1896.....	8,472	985.45	.116	1894.....	4,602	346.50	.075
1897.....	8,475	768.39	.091	1895.....	4,538	2,255.35	.497
1898.....	8,949	1,797.21	.201	1896.....	4,404	909.88	.207
1899.....	8,849			1897.....	4,656	2,992.28	.643
SECOND GRADE.				1898.....	4,743	1,925.77	.406
1892.....	5,814	1,793.70	.308	1899.....	4,809	2,767.70	.575
1893.....	5,904	48.65	.008	SIXTH GRADE.			
1894.....	6,014	498.28	.082	1893.....	3,548	12,796.60	3.606
1895.....	5,921	1,221.36	.206	1894.....	3,598	768.74	.216
1896.....	6,099	1,287.34	.211	1895.....	3,945	1,334.56	.338
1897.....	6,196	1,736.20	.280	1896.....	3,900	5,961.83	1.528
1898.....	6,472	2,518.52	.389	1897.....	3,767	2,891.50	.767
1899.....	6,310	612.50	.097	1898.....	4,021	5,303.16	1.327
THIRD GRADE.				1899.....	3,991	4,471.57	1.120
1892.....	5,390	4,209.92	.781	SEVENTH GRADE.			
1893.....	5,223	207.24	.040	1894.....	2,986	14,108.90	4.725
1894.....	5,153	507.56	.098	1895.....	3,145	2,300.78	.744
1895.....	5,608	3,767.94	.672	1896.....	3,199	3,145.02	.983
1896.....	5,687	1,421.96	.250	1897.....	3,179	2,656.13	.835
1897.....	5,808	1,097.78	.189	1898.....	3,163	2,223.31	.703
1898.....	5,761	1,608.65	.279	1899.....	3,272	3,160.31	.966
1899.....	6,053	1,727.46	.285	EIGHTH GRADE.			
FOURTH GRADE.				1894.....	2,570	13,143.70	5.114
1892.....	4,877	7,670.16	1.573	1895.....	2,685	1,663.81	.608
1893.....	5,011	249.87	.049	1896.....	2,658	2,094.15	.787
1894.....	4,776	489.27	.102	1897.....	2,731	2,588.38	.948
1895.....	4,725	1,301.34	.275	1898.....	2,892	1,093.26	.378
1896.....	5,055	1,673.12	.330	1899.....	2,747	1,584.53	.576
1897.....	5,150	3,738.42	.726				

Tables showing cost of supplies and of miscellaneous expenses, by grades, for each year.

Year.	Num- ber of pupils.	Total cost.	Average cost per pupil.	Year.	Num- ber of pupils.	Total cost.	Average cost per pupil.
FIRST GRADE.				FOURTH GRADE— continued.			
1892.....	8,005	\$1,793.00	\$0.224	1898.....	5,426	\$2,683.08	\$0.494
1893.....	8,076	2,029.06	.251	1899.....	5,375	2,850.76	.530
1894.....	8,446	2,674.81	.316	FIFTH GRADE.			
1895.....	8,148	2,719.07	.334	1893.....	4,657	3,150.83	.724
1896.....	8,472	3,269.48	.386	1894.....	4,602	2,691.37	.585
1897.....	8,475	3,121.56	.368	1895.....	4,538	1,711.28	.377
1898.....	8,949	3,776.29	.422	1896.....	4,404	2,098.34	.476
1899.....	8,849	4,261.17	.481	1897.....	4,656	2,172.37	.466
SECOND GRADE.				1898.....	4,743	2,191.88	.462
1892.....	5,814	1,591.31	.274	1899.....	4,809	2,928.54	.600
1893.....	5,904	1,834.51	.310	SIXTH GRADE.			
1894.....	6,014	2,239.98	.372	1893.....	3,548	2,610.85	.726
1895.....	5,921	1,839.62	.311	1894.....	3,598	2,154.05	.599
1896.....	6,090	3,453.64	.564	1895.....	3,945	1,471.81	.373
1897.....	6,196	3,597.07	.580	1896.....	3,900	1,842.87	.472
1898.....	6,472	3,873.82	.598	1897.....	3,767	1,884.28	.500
1899.....	6,310	3,984.07	.631	1898.....	4,021	1,887.44	.469
THIRD GRADE.				1899.....	3,991	2,451.56	.614
1892.....	5,390	2,270.45	.421	SEVENTH GRADE.			
1893.....	5,223	2,348.59	.449	1894.....	2,986	1,630.04	.546
1894.....	5,153	2,143.84	.416	1895.....	3,145	1,435.01	.464
1895.....	5,608	2,135.95	.381	1896.....	3,199	1,196.98	.374
1896.....	5,687	2,435.14	.428	1897.....	3,179	1,607.24	.505
1897.....	5,808	2,639.84	.454	1898.....	3,163	1,703.72	.538
1898.....	5,761	2,993.87	.519	1899.....	3,272	1,951.14	.596
1899.....	6,053	3,210.27	.530	EIGHTH GRADE.			
FOURTH GRADE.				1894.....	2,570	1,451.17	.564
1892.....	4,877	1,495.03	.306	1895.....	2,685	1,834.04	.670
1893.....	5,011	2,299.37	.459	1896.....	2,658	1,135.38	.427
1894.....	4,776	1,971.71	.413	1897.....	2,731	1,269.66	.465
1895.....	4,725	1,877.66	.398	1898.....	2,892	1,581.80	.547
1896.....	5,055	1,946.77	.385	1899.....	2,747	1,625.79	.592
1897.....	5,150	3,102.39	.602				

TABLE V.—*Growth of the schools since the year 1880.*

School year ending June 30—	Average number of pupils enrolled.					
	First eight divisions.		Ninth, tenth and eleventh divisions.		Total.	
	Number.	Per cent of increase.	Number.	Per cent of increase.	Number.	Per cent of increase.
1880.....	15,027	.....	6,573	.....	21,600	.....
1881.....	15,494	3.10	6,567	<i>a</i> 0.09	22,061	2.13
1882.....	16,063	3.60	6,763	2.98	22,826	3.46
1883.....	16,524	2.80	7,070	4.53	23,594	3.36
1884.....	16,642	.71	7,225	2.19	23,867	1.11
1885.....	17,468	4.90	7,689	6.42	25,157	5.40
1886.....	18,720	7.10	8,191	6.52	26,911	6.97
1887.....	19,285	3.00	8,448	3.13	27,733	3.05
1888.....	19,762	2.40	8,791	4.06	28,553	2.95
1889.....	20,477	3.60	9,088	3.37	29,565	3.54
1890.....	21,077	2.90	9,289	2.21	30,366	2.70
1891.....	21,599	2.60	9,702	4.25	31,301	3.07
1892.....	22,264	3.00	9,942	2.47	32,206	2.89
1893.....	22,395	.59	10,097	1.56	32,492	.89
1894.....	23,483	4.85	10,141	.43	33,624	3.48
1895.....	23,798	1.32	10,046	<i>a</i> .94	33,844	.65
1896.....	24,347	2.26	10,296	2.48	34,643	2.36
1897.....	25,261	3.75	10,420	1.20	35,681	2.99
1898.....	26,243	3.88	10,578	1.51	36,821	3.19
1899.....	26,742	1.90	10,171	<i>a</i> 3.84	36,913	.25

a Decrease.

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

TABLE VI.—Average enrollment of pupils in the white and colored schools and the number of teachers employed for each year since the year 1880.

School year ending June 30—	Average enrollment.						Teachers.	
	First eight divi- sions.		Ninth, tenth and eleventh divisions.		Total.		Whole number em- ployed.	Increase.
	Number.	Per cent of increase.	Number.	Per cent of increase.	Number.	Per cent of increase.		
					21,600		434	
1880.....	15,027		6,573		22,061	2.13	461	27
1881.....	15,494	3.10	6,567	^a 0.09	22,826	3.46	485	24
1882.....	16,063	3.60	6,763	2.98	23,594	3.36	505	20
1883.....	16,524	2.80	7,070	4.53	23,867	1.11	525	20
1884.....	16,642	.71	7,225	2.19	25,157	5.40	555	30
1885.....	17,468	4.90	7,689	6.42	26,911	6.97	595	40
1886.....	18,720	7.10	8,191	6.52	27,733	3.05	620	25
1887.....	19,285	3.00	8,448	3.13	28,553	2.95	654	34
1888.....	19,762	2.40	8,791	4.06	29,565	3.54	693	39
1889.....	20,477	3.60	9,088	3.37	30,366	2.70	745	52
1890.....	21,077	2.90	9,289	2.21	31,301	3.07	795	50
1891.....	21,599	2.60	9,702	4.25	32,206	2.89	845	50
1892.....	22,264	3.00	9,942	2.47	33,492	.89	895	50
1893.....	22,395	.59	10,097	1.56	33,624	3.48	942	47
1894.....	23,483	4.85	10,141	.43	33,844	.65	991	49
1895.....	23,798	1.32	10,046	^a .94	34,643	2.36	1,031	40
1896.....	24,347	2.26	10,296	2.48	35,681	2.99	1,071	40
1897.....	25,261	3.75	10,420	1.20	36,821	3.19	1,107	36
1898.....	26,243	3.88	10,578	1.51	36,913	.25	11,159	52
1899.....	26,742	1.90	10,171	^a 3.84				

^a Decrease.^b Includes 16 kindergarten teachers.

TABLE VII.—Average enrollment of pupils, the number of teachers employed, the cost of tuition, and rates of increase for each year since 1880.

School year ending June 30—	Average enrollment.		Teachers.		Cost (excluding rent and permanent improvements).		
	Total.	Per cent of increase.	Number employed.	Increase.	Per pupil (based on average enrollment).	Aggregate amount.	Per cent of increase.
1880.....	21,600	-----	434	-----	\$16.95	\$366,199.51	-----
1881.....	22,061	2.13	461	27	17.28	381,314.19	4.12
1882.....	22,826	3.46	485	24	17.44	398,254.54	4.44
1883.....	23,594	3.36	505	20	17.78	419,594.60	5.35
1884.....	23,867	1.11	525	20	18.22	435,032.79	3.67
1885.....	25,157	5.40	555	30	18.66	469,550.51	7.93
1886.....	26,911	6.97	595	40	17.76	477,993.67	1.79
1887.....	27,733	3.05	620	25	19.11	509,194.01	6.52
1888.....	28,553	2.95	654	34	19.11	545,717.71	7.17
1889.....	29,565	3.54	693	39	20.11	594,774.73	8.98
1890.....	30,366	2.70	745	52	21.58	655,316.08	10.17
1891.....	31,301	3.07	795	50	21.44	671,124.08	2.41
1892.....	32,206	2.89	845	50	22.49	724,521.93	7.95
1893.....	32,492	.89	895	50	23.93	776,616.53	7.19
1894.....	33,624	3.48	942	47	24.56	825,992.84	6.36
1895.....	33,844	.65	991	49	24.78	838,757.60	1.54
1896.....	34,643	2.36	1,031	40	25.23	882,273.18	5.18
1897.....	35,681	2.99	1,071	40	26.03	913,595.79	3.56
1898.....	36,821	3.19	1,107	36	26.07	959,804.34	5.05
1899.....	36,913	.25	1,159	52	27.13	988,415.26	2.98

a Includes 16 kindergarten teachers.

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

TABLE VIII.—Whole enrollment of pupils in white and colored schools, the number of teachers employed, and the cost of tuition for each year since the year 1880.

School year ending June 30—	Whole enrollment.						Teachers.		Cost (excluding rent and permanent improvements).		
	First eight divisions.		Ninth, tenth, and eleventh divisions.		Total.		Whole number employed.	Increase.	Per pupil (based on whole enrollment).	Aggregate amount.	Per cent of increase.
	Number.	Per cent of increase.	Number.	Per cent of increase.	Number.	Per cent of increase.					
1880.....	18,378	-----	8,061	-----	26,439	-----	434	-----	\$13.85	\$366,199.51	-----
1881.....	19,153	4.21	8,146	1.05	27,299	3.25	461	27	13.96	381,314.19	4.12
1882.....	19,031	a .63	8,289	1.75	27,320	.07	485	24	14.57	398,254.54	4.44
1883.....	19,836	4.22	8,710	5.07	28,546	4.48	505	20	14.69	419,594.60	5.35
1884.....	21,221	6.98	9,167	5.24	30,388	6.45	525	20	14.31	435,032.79	3.67
1885.....	21,267	.21	9,598	4.70	30,865	1.56	555	30	15.21	469,550.51	7.93
1886.....	22,198	4.37	10,138	5.62	32,336	4.76	595	40	14.78	477,993.67	1.79
1887.....	23,073	3.94	10,345	2.04	33,418	3.34	620	25	15.23	509,194.01	6.52
1888.....	23,810	3.19	11,040	6.71	34,850	4.28	654	34	15.65	545,717.71	7.17
1889.....	24,594	3.29	11,170	1.17	35,764	2.62	693	39	16.62	594,774.73	8.98
1890.....	25,468	3.55	11,438	2.39	36,906	3.19	745	52	17.75	655,310.08	10.17
1891.....	26,254	3.47	12,132	6.07	38,386	4.01	795	50	17.48	671,124.08	2.41
1892.....	27,398	3.96	12,280	1.21	39,678	3.36	845	50	18.26	724,521.93	7.95
1893.....	27,435	.14	12,329	.39	39,764	.22	895	50	19.53	776,616.53	7.19
1894.....	28,445	3.68	12,233	a .78	40,678	2.29	942	47	20.30	825,992.84	6.36
1895.....	29,078	2.22	12,479	2.01	41,557	2.16	991	49	20.18	838,757.60	1.54
1896.....	29,588	1.75	12,876	3.26	42,464	2.18	1,031	40	20.59	882,273.18	5.18
1897.....	30,141	1.87	12,854	1.17	42,995	1.25	1,071	40	21.60	913,595.79	3.56
1898.....	31,723	5.24	12,975	.94	44,698	3.96	1,107	36	21.47	959,804.34	5.05
1899.....	32,766	3.28	12,794	a 1.39	45,560	1.92	1,159	52	21.98	988,415.26	2.98

a Decrease.

b Includes 16 kindergarten teachers

TABLE IX.—Amount expended for rent and sites and buildings each year from the year 1880 to the year 1899, inclusive.

School year ending June 30—	Rent.	Sites and buildings.	School year ending June 30—	Rent.	Sites and buildings.
1880.....	\$28,908.35	\$74,998.24	1890.....	\$10,000.00	\$240,467.39
1881.....	26,506.11	103,416.91	1891.....	9,892.00	229,078.00
1882.....	26,472.57	253,609.73	1892.....	9,602.00	220,344.47
1883.....	14,805.33	103,141.47	1893.....	8,951.25	42,270.36
1884.....	8,742.50	103,563.94	1894.....	9,825.50	66,939.60
1885.....	7,060.00	118,400.00	1895.....	9,648.00	66,408.91
1886.....	6,919.66	61,130.04	1896.....	14,736.50	185,601.12
1887.....	7,354.00	73,085.34	1897.....	14,188.00	182,514.26
1888.....	10,215.44	239,115.77	1898.....	14,934.00	139,669.00
1889.....	14,832.00	332,312.44	1899.....	13,420.00	72,127.86

FIRST EIGHT DIVISIONS.

The number of pupils enrolled during the year was 32,766—30,244 white and 2,522 colored. This is an increase of 1,043, or 3.28 per cent—white, 933, or 3.18 per cent; colored, 110, or 4.56 per cent—over the number registered last year.

The average enrollment was 26,742—24,819 white and 1,923 colored—being 499, or 1.90 per cent, in excess of that of the previous year.

The number of pupils in daily attendance was 24,492—22,728 white and 1,764 colored—being 149, or 0.61 per cent, greater than that of the preceding year.

The number of teachers, 825—white, 770; colored, 55—was distributed as follows:

Per cent of teachers.

	White.		Colored.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.
Supervisors and special teachers.....	3.03	6.43	.....	0.12	3.03	6.55
Normal schools.....	.....	.97	.....	.....	.....	.97
High schools.....	4.73	8.00	.....	.....	4.73	8.00
Grammar and primary schools.....	2.54	66.67	1.94	4.36	4.48	71.03
Kindergarten schools.....	.....	.97	.....	.24	.....	1.21
Total.....	10.30	83.04	1.94	4.72	12.24	87.76

TABLE X.—*Enrollment of pupils in the several kinds and grades of schools for the school year ending June 30, 1899.*

Normal school.....	100
High schools.....	2,579
Total.....	2,679
Grammar schools:	
Eighth grade.....	2,247
Seventh grade.....	2,595
Sixth grade.....	3,067
Fifth grade.....	3,555
Total.....	11,464
Primary schools:	
Fourth grade.....	3,859
Third grade.....	4,276
Second grade.....	4,260
First grade.....	5,714
Total.....	18,109
Kindergartens.....	514
Grand total.....	32,766

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TABLE XI.—Enrollment of pupils in the several kinds of schools for the school year ending June 30, 1899, compared with the enrollment of the previous year.

Grade.	Whole enrollment.			
	1898-99.	1897-98.	Increase.	Decrease.
Normal school	100	99	1	.....
High schools	2,579	2,426	153	.....
Total	2,679	2,525	154	.....
Grammar schools:	2,247	2,339	.....	92
Eighth grade	2,595	2,446	149	.....
Seventh grade	3,067	3,082	.....	15
Sixth grade	3,555	3,466	89	.....
Fifth grade	11,464	11,333	238	107
Total .....	.....	.....	.....	.....
Primary schools:	3,859	3,786	73	.....
Fourth grade	4,276	3,917	359	.....
Third grade	4,260	4,237	23	.....
Second grade	5,714	5,925	.....	211
First grade	18,109	17,865	455	211
Total	514	.....	514	.....
Kindergartens	32,766	31,723	1,361	318
Grand total .....	.....	.....	.....	.....

TABLE XII.—Showing the whole enrollment of white pupils within the city for the school year ending June 30, 1899.

Grade.	Whole enrollment.			
	Boys.	Girls.	Total.	Per cent.
Normal school	1	99	100	0.37
High schools	1,056	1,523	2,579	9.75
Eighth grade	814	1,108	1,922	7.26
Seventh grade	987	1,241	2,228	8.42
Sixth grade	1,201	1,391	2,592	9.80
Fifth grade	1,404	1,463	2,867	10.83
Fourth grade	1,510	1,554	3,064	11.58
Third grade	1,707	1,648	3,355	12.68
Second grade	1,690	1,522	3,212	12.13
First grade	2,201	1,944	4,145	15.66
Kindergarten	194	207	401	1.52
Total	12,765	13,700	26,465	100.00
SUMMARY.				
Normal and high schools	1,057	1,622	2,679	10.12
Grammar schools	4,406	5,203	9,609	36.31
Primary schools	7,108	6,668	13,776	52.05
Kindergartens	194	207	401	1.52
Total	12,765	13,700	26,465	100.00

TABLE XIII.—*Showing the whole enrollment of white pupils in the first eight divisions (city and county) for the school year ending June 30, 1899.*

Grade.	Whole enrollment.			
	Boys.	Girls.	Total.	Per cent.
Normal school	1	99	100	0.33
High schools	1,056	1,523	2,579	8.53
Eighth grade	924	1,238	2,162	7.15
Seventh grade	1,092	1,385	2,477	8.19
Sixth grade	1,368	1,558	2,926	9.67
Fifth grade	1,597	1,712	3,309	10.94
Fourth grade	1,761	1,808	3,569	11.80
Third grade	1,963	1,919	3,882	12.84
Second grade	2,017	1,811	3,828	12.66
First grade	2,652	2,320	4,972	16.43
Kindergarten	218	222	440	1.46
Total	14,649	15,595	30,244	100.00
SUMMARY.				
Normal and high schools	1,057	1,622	2,679	8.86
Grammar schools	4,981	5,893	10,874	35.95
Primary schools	8,393	7,858	16,251	53.73
Kindergartens	218	222	440	1.46
Total	14,649	15,595	30,244	100.00

TABLE XIV.—*Showing the whole enrollment of pupils (white and colored) in the first eight divisions (city and county) for the school year ending June 30, 1899.*

Grade.	Whole enrollment.			
	Boys.	Girls.	Total.	Per cent.
Normal school	1	99	100	0.30
High schools	1,056	1,523	2,579	7.87
Eighth grade	946	1,301	2,247	6.86
Seventh grade	1,135	1,460	2,595	7.92
Sixth grade	1,423	1,644	3,067	9.36
Fifth grade	1,701	1,854	3,555	10.85
Fourth grade	1,884	1,975	3,859	11.78
Third grade	2,142	2,134	4,276	13.05
Second grade	2,244	2,016	4,260	13.00
First grade	3,052	2,662	5,714	17.44
Kindergarten	243	271	514	1.57
Total	15,827	16,939	32,766	100.00
SUMMARY.				
Normal and high schools	1,057	1,622	2,679	8.17
Grammar schools	5,295	6,259	11,464	34.99
Primary schools	9,322	8,787	18,109	55.27
Kindergartens	243	271	514	1.57
Total	15,827	16,939	32,766	100.00

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

The number of schools below the high schools was as follows:

Grammar schools, city:	44	
Eighth grade	49	
Seventh grade	57	
Sixth grade	61	
Fifth grade		211
Primary schools, city:	64	
Fourth grade	70	
Third grade	72	
Second grade	81	
First grade		287
Kindergartens, city		7
County schools:	82	
White	52	
Colored		134
Kindergartens, county:	1	
White	2	
Colored		3
Total		642
Number of whole-day schools (white, 444; colored, 38)	482	
Number of half-day schools (white, 136; colored, 14)	150	
Number of kindergarten schools (white, 8; colored, 2)	10	
		642

The average number of pupils to a school (based on the whole enrollment) was as follows:

High schools (to a teacher, excluding director)	24.8
Eighth grade	43.7
Seventh grade	45.5
Sixth grade	45.4
Fifth grade	47.0
Fourth grade	47.9
Third grade	47.9
Second grade	44.6
First grade	51.2
Kindergarten	57.3
County schools:	
White	45.6
Colored	47.1
Kindergarten schools:	
White	39.0
Colored	37.0

TEACHERS.

Eight hundred twenty-five teachers—725 females and 100 males—
were employed as follows:

Supervising principals	12	
Normal school	8	
High schools	105	125
Grammar schools, city:		
Eighth grade	44	
Seventh grade	49	
Sixth grade	57	
Fifth grade	60	210
Primary schools, city:		
Fourth grade	62	
Third grade	68	
Second grade	70	
First grade	79	279
County schools:		
White	82	
Colored	52	134
Kindergartens:		
City (white)	7	
County (white, 1; colored, 2)	3	10
Teachers of music	9	
Teachers of drawing	6	
Teachers of manual training	17	
Teachers of cooking	12	
Teachers of sewing	17	
Teachers of physical culture	5	
Librarian	1	67
Total (white—male 84, female 686; colored—male 16, female 39)		825

The cost of the schools for supervision and teaching was as follows:

Supervision:	
Superintendent	\$3,300.00
Eight supervising principals	16,000.00
One director of primary work	1,500.00
Three assistant directors, primary work	2,400.00
One librarian	650.00
One clerk	1,200.00
One messenger	300.00
Total	25,350.00
Cost per pupil, estimated on average enrollment (26,742) .....	.94

Normal school:	
Principal	\$1,500.00
Two training teachers	2,400.00
Two practice teachers	1,800.00
Three teachers	2,050.00
Total	¹ 7,750.00
Cost per pupil, estimated on average enrollment (98)	31.19
High schools:	
Director	2,500.00
Four principals	5,800.00
One hundred teachers	87,275.00
Total	95,575.00
Cost per pupil, estimated on average enrollment (2,215)	43.15
Grammar schools, city (44 eighth-grade, 49 seventh-grade, 57 sixth-grade, and 61 fifth-grade schools)	² 174,420.00
Cost per pupil, estimated on average enrollment (8,169)	21.44
Primary schools, city (64 fourth-grade, 70 third-grade, 72 second-grade, and 81 first-grade schools)	³ 143,239.31
Cost per pupil, estimated on average enrollment (11,118)	13.15
County schools:	
White (82)	52,427.08
Colored (52)	31,825.00
Cost per pupil, estimated on average enrollment:	
White (2,953)	17.75
Colored (1,870)	17.02
Kindergarten schools:	
White, city	2,800.00
White, county	360.00
Colored, county	720.00
Cost per pupil, estimated on average enrollment:	
White, city (240)	11.67
White, county (26)	13.85
Colored, county (53)	13.59
Special teachers (9 music teachers, 6 drawing teachers, and 5 teachers of physical culture)	14,542.50
Cost per pupil, estimated on average enrollment (24,429) .....	.59
Teachers of manual training (of carpentry, 15; of metal working, 2; of cooking, 12, and of sewing, 16)	31,760.00
Cost per pupil, estimated on average enrollment (26,742)	1.19
Total cost per pupil, estimated on average enrollment	21.71

¹ This includes the cost of teaching nine practice schools, \$4,692.72.

² To be increased by the cost of teaching one practice school, \$700.

³ To be increased by the cost of teaching 8 practice schools, \$3,992.72.

TABLE XIX.—Buildings and rooms occupied (owned and rented) in the first eight divisions at the close of the school year ending June 30, 1899 (excluding the high schools).

	Divisions.								Total.
	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	
Buildings owned.....			10	6	10	10	18	14	84
Buildings rented.....	8	8 2	1	-----	3	4	-----	-----	10
Total.....		10	11	6	13	14	18	14	94
Rooms owned.....	8	10	80	55	76	76	91	75	608
Rooms rented.....	a 78	b 77 g 6	c 80 h 2	d 55 i 2	e 76 j 5	f 76 k 6	-----	1	22
Rooms rented.....		g 6	h 2	i 2	j 5	k 6	-----	1	22
Total.....	78	83	82	57	81	82	91	76	630

a Three rooms occupied by cooking schools, 2 rooms by manual-training schools, and 1 room by sewing (fitting) school.
b One room occupied by cooking school.
c One room occupied by cooking school, 1 room by sewing (fitting) school, and 1 room by manual-training school.
d One room occupied by manual-training school.
e Four rooms occupied by cooking schools and 4 rooms by manual-training schools.
f Two rooms occupied by cooking schools, 2 rooms by manual-training schools, and 2 rooms each occupied by a manual-training and a cooking school.
g Two rooms occupied by cooking school, 2 rooms by sewing (fitting) school, and 2 rooms by manual-training schools. Does not include high-school manual-training shops (7 rooms).
h One room occupied by cooking school and 1 room by manual-training school.
i Occupied by sewing (fitting) school.
j One room occupied by cooking school, 2 rooms by sewing (fitting) school, and 2 rooms by manual-training school.
k One room occupied by sewing (fitting) school.

NIGHT SCHOOLS.

The following table shows the facts of enrollment, attendance, and cost:

Table showing facts relating to night schools.

School.	Cost of teachers.	Whole number of persons enrolled during the year.	Average attendance per night.	Percentage of attendance.	Number of sessions.	Number of teachers.
WHITE.						
High.....	\$1,021.00	458	180	85.2	79	7
Franklin.....	414.50	83	26	88.7	61	3
Henry.....	403.00	142	30	75.9	62	3
Wallach.....	496.00	133	32	79.1	62	4
Jefferson.....	403.00	97	29	79.4	62	3
Curtis.....	186.00	43	10	81.2	62	1
Grant.....	111.00	29	7	72.6	37	1
Total.....	3,034.50	985	314	84.4	.....	22
Schools of cookery:						
609 O street.....	148.50	100	18	81.8	66	1
Wallach.....	148.50	60	18	88.0	66	1
Total.....	297.00	160	36	84.7	.....	2
Total white.....	3,331.50	1,145	350	84.4	.....	24
COLORED.						
Mott.....	403.00	91	35	77.0	62	3
Wilson.....	279.00	83	25	86.9	62	2
Hillsdale.....	186.00	84	23	67.5	62	1
Total colored.....	868.00	258	83	81.9	.....	6
Grand total.....	4,199.50	1,303	433	83.9	.....	30

MEDICAL INSPECTION OF SCHOOLS.

I again call the attention of the board of trustees to the importance of having the schools inspected at stated intervals by medical experts appointed for the purpose and paid for their services. This movement is desirable from many points of view.

First of all, perhaps, is the responsibility of the school authorities as the representatives of Government for the welfare of the children. The children (a very large portion of all the people) are assembled by authority of Government. This fact emphasizes the school's responsibility and duty in the prevention of contagion as far as possible.

From an economical point of view medical inspection may be shown to be advantageous. A large percentage of the effort of the school is lost by absence of pupils which could be prevented. This relates to the financial loss of the school only. The financial saving to the community by the prevention of disease would be very much greater, of course; but the prevention of loss of time of teacher and pupil by disease is only a small part of the benefit that the school would receive. The teacher would learn to know better how to deal with children, because he would understand their physical weaknesses better than he now does. This benefit would be much greater than that of the prevention of loss of time. By medical inspection the teachers would gradually be educated in broader seeing and understanding of the pupils' natures and conditions, and would thus learn how better to minister to their necessities and direct their possibilities. Medical inspection would prove to be wise for a pedagogical consideration alone.

The allaying of fear or anxiety on the part of the people would be another large return to the community for the financial outlay incurred by medical inspection. The parents who send to school could do so with a feeling that the children while at school would be safe from contagion.

At present all teachers do not know the symptoms of approaching diseases. It is not reasonable that we should expect them to know them. Through medical inspection, however, teachers who remain in the schools a term of years would gradually become expert themselves.

This expertness would increase, and perhaps in time would obviate the necessity for paid medical inspection except for the purpose of directing the same. By that process the people at large also would gradually come to know more of themselves and how better to take care of themselves. Like all other beneficial movements, this would be of slow progress, but ultimately its value would be incalculable.

FREE TEXT-BOOKS.

The appropriations for free text-books and supplies are proving inadequate from year to year. It ought not to be expected that 45,000 children can be supplied with text-books and appliances with which and by which to learn, and with which to practice in expressing themselves and representing what they learn, for \$40,000. (The appropriation for free text-books and supplies for the year was \$40,000; the enrollment for the year in the schools below the high school was 41,406.) This is less than one dollar per pupil.

The consideration of this point is suggested here by the foregoing remarks on medical inspection (the conservation of the health of the pupils and the community). One of the first demands of medical direction is that each child shall be supplied with a book, to the end that two or more children shall not use the same book. To supply a book to each child in every case where books are used will require a larger amount of money than we have ever had at our command. The greatly increased outlay, however, will be required only for the first supply. Thereafter the outlay would not be relatively much larger than it now is, because books would not wear out so rapidly as they now do. There is no doubt, however, that the outcome of the free text-book scheme will be that the child will be allowed to keep as his own property the books furnished him. I respectfully request the attention of the board to the important matter of securing larger appropriations for the purchase of free text-books and supplies.

NIGHT SCHOOLS.

Night schools in the District continue to be an interesting and profitable department of education. We have, however, for lack of funds, been unable to provide schools for every locality asking for them. The appropriation made at the last session of Congress will enable us to extend these schools somewhat another year. This is a movement to be desired, as the history of our night schools clearly proves.

It is interesting to know, that whereas in the early history of night schools in the District of Columbia the lowest class (we divided the night schools into three classes—a beginners' class, a middle class, and an upper-grade class) was by far the largest, being in many instances greatly crowded, this condition changed gradually until it became desirable to establish an advanced grade of school, which was termed the night high school. The night high school has grown from its beginning, until now it is a large institution, whereas the lowest or primary class in nearly every section of the city has become very small. It is interesting to know further that this lowest class in the white schools is composed chiefly of foreigners, persons who attend school largely for the purpose of acquiring the English language. Many of those who are not foreigners are persons older than one expects to find in primary and intermediate schools, who because of lack of previous opportunity are now seeking the beginnings of a scholastic education. The change from large numbers and crowded conditions in this lowest class of the school to small numbers, and from young people in the main to more mature people chiefly, has been the cause of solicitous and careful inquiry on my part. On consulting the principals of the night schools (some of whom have been employed in the capacity of principals for a number of years, thus becoming veterans in the work) they have unanimously suggested the belief that the change above alluded to is due to the fact that the public day schools are inducing a better and more regular attendance than in former years. These principals assure me that few persons present themselves as pupils, other than the foreigners and the unfortunate persons named in the foregoing, who have not attended the day schools three or more years. (The majority of such persons having these attainments are assigned to the middle grade of schools.)

If the theory here set forth is a true one, it proves that the day schools are fulfilling their mission better than they have done in the past. This is a question worthy of further study for more accurate data. For a number of years I have had little doubt that if the day schools could and would do their whole duty in providing schools enough, and in teaching the child when he presents himself at school in a way to interest and profit him at the same time, there would be little for night schools to do other than to afford intermediate and advanced instruction for persons who by being employed in bread winning during the working hours of the day are, by force of circumstances, deprived the privilege of day schools. That the attendance and character of the night

schools have radically changed is noteworthy, the attendance being relatively smaller and of different character and the scholarship in the main much advanced. A change is also marked in the conduct of those who attend the schools, the work of the government of the schools being now slight and causing little trouble.

The night high school, as stated in the foregoing, has grown to relatively large proportions. In this school are found young men and women, few of whom are advanced in years and few of whom are very young. These people are breadwinners, employed in the day-time, on small salaries usually, who are seeking to become worthy of better salaries and competent to receive them or at least to demand them.

Two or three years since Dr. F. R. Lane, the director of high schools, was requested to direct the work of the night high school also. The wisdom of this movement is proven by the changed character of this school and by its increasing value from year to year, as is evident on slight investigation.

The course of instruction consists of English, mathematics, stenography, typewriting, bookkeeping, and mechanical drawing.

Nothing done by the public schools of Washington, so far as I can judge, is of more importance or more valuable in relation to the amount of money expended than that done by the night schools. Nothing seems more nearly true altruistic policy under governmental control than the work done for the people who attend the night schools.

We have given the teachers of these night schools small compensation for their work. We ought to increase their pay by at least 33½ per cent. One difficulty in sustaining a uniform efficiency of schools from year to year has been the meager compensation given the teachers. No school can be what it ought to be without a good teacher. This is as true of the night school as of any other school. Many teachers who teach well in the day schools are unfitted for good night-school work. No person who has not learned to teach can teach a night school. The successful teacher of the old country school is the kind of instructor and manager demanded by the night school. The variety of persons to be taught in one class of the night school is as great in some instances as the variety of persons found in the winter country school. Ages differ proportionally. The character of teaching demanded is as varied and as exacting. Many of our teachers who have been employed for a number of years do this character of work. Where such teachers are

found, the schools are valuable. When, by force of circumstances, we are compelled to try teachers unaccustomed to the work, the school decimates before we have an opportunity or the ability to change its character. When this happens the benefit to be derived from the school is almost wholly lost for the year. Probably the most delicate part of our work in connection with the night school is to prevent it from being a farce and an opportunity for some one to draw a salary.

A special feature of the night schools made possible by the decrease of elementary schools is the extension of the cooking schools. These have been crowded and are, I believe, very valuable. The number of homes that are benefited by the work done in these schools is great. Judging from the character of the persons who attend, the pupils are there for the purpose of learning how to make home what it ought to be, many anticipating experience in the near future in this especial and important social function. The average number of white pupils attending the night schools was 985, whereas the number attending the cooking schools was 160, being 14 per cent. of the whole number. It will be seen that relatively the domestic feature of our night schools is an important one. As in the other night schools, the course of instruction in the cooking night school is variable, adapted to the desires, capabilities, or necessities of those who are trying to learn domestic art and economy

VACATION SCHOOLS.

It is in my judgment desirable for the board to consider the propriety of asking for appropriations for the purpose of sustaining a limited number of vacation schools in the District. An experiment was made during the vacation just closed at the McCormick School which proves conclusively how such schools when suited to the conditions of the pupils in attendance may be profitable and desirable.

This school was managed by Mr. Raymond R. Riordon, principal of the Smallwood School.

I believe that the vacation school is as important relatively and can be made correspondingly as valuable as the night school and the kindergarten, and that it is to be placed in the same category with these two kinds of schools. It partakes of the nature of the kindergarten in the significant particular that it is intended to employ in a profitable way the time of children who, as known to us, would otherwise be improperly employed. Vacation gives opportunity to many children

who are unable to leave the city not only to waste much time but to employ much time in doing things that are not only unprofitable but sometimes also baneful and menacing.

The child who leaves the city with his parents or to be with friends in the country is not the one for whom the vacation school is intended. The child who when school is out roams the streets or spends his days in associations that may not be helpful to him and may not be useful in making him safe to society, is the one who would be benefited by this kind of school. A "youth" garden instead of a "kinder" garden, it may be called. Its activities undoubtedly should be much like those of the kindergarten in general principle, but adapted to the age of the child. That same inborn tendency exists in the older boy that leads the child of kindergarten age to invent to gratify his curiosity. This tendency is satisfied in the kindergarten, and the safety of society is secured by giving him opportunity to invent the right thing under proper direction. This tendency of the older boy can be satisfied by giving him the opportunity to invent and to do under proper direction. A study of the parks, the city's industries, the city's modes of travel, and many other like things afford abundant opportunity for the selection of recreative work. All of the knowledge thus gained should be properly related and formulated and should be accompanied by formal education for its expression and profitable application.

As the night school is established chiefly for those who have neglected or have not had the opportunity to secure some education, so the vacation school may serve a like purpose for the few who have been careless about attending the regular schools.

It would not be wise, in my judgment, to establish such schools very rapidly. Perhaps the city will never require many of them. There need be very little cost connected with the vacation schools further than that of paying the teaching force, with possibly a small additional outlay for the services of janitors. The droves of boys who roam the streets during the morning hours of hot weather may well be employed in learning something that will make them useful citizens and, what is more important, will prevent them from doing many things that will lead to more flagrant conduct. It will not cost much money relatively to employ these children in activities that will lead them to value their time and to use it to advantage.

The vacation school conducted as was that by Mr. Riordon, which I take pleasure in commending in high degree, may be made most inter-

esting to the ordinary boy who has curiosity, energy, and possibility in him. A summer outing within the city under the guidance of a person who is also an intelligent friend is the idea I have in mind for the vacation school.

It would be well, it seems to me, for the board of trustees to ask the Commissioners to allow us a few salaries for further experiment.

TRUANCY.

Suggested by the foregoing, I desire to call the attention of the board of trustees to the fact that although we have a truant law we do not have any machinery by which it can be enforced. If Congress would give us a truant officer, or if the District Commissioners could be empowered to detail police officers from time to time, to be directed by the superintendents, we might ascertain whether or not there is a great number of persons who do not attend school who ought to be in school. Our trouble now is that we do not know. I believe that the number of children not going to school is not so great but that we could provide accommodations for every person who should come to school. So far nobody is deprived of the privilege of attending school. In some few cases children may have to go several blocks farther than their parents desire them to go to find accommodations, but so far as I know in connection with the schools under my immediate supervision no one has been refused a place in school for lack of room.

SCHOOL CENSUS.

It is desirable for us to know how many children there are of school age in the District. I therefore respectfully suggest the propriety of seeking to have in the forthcoming decennial enumeration these facts ascertained and set forth in such a way as to serve our purpose. We need to know the number of children of school age (6 to 18 years) within the city and also the number outside of the city lines within the District, the white and colored separately.

From year to year we ought to know whether truancy is increasing or decreasing; we ought to know whether parents are growing more careless or more careful in respect to the education of their children. A biennial enumeration of children of school age ought to be made.

KINDERGARTENS.

During the year the beginning of a significant extension of school privileges was made by the opening of a few kindergartens. This was made possible by a provision in the appropriations act of Congress for the support of the public schools for the year, as follows: "For kindergarten instruction, twelve thousand dollars."

In compliance with this act 16 kindergartens were opened, 3 of which were for white children and 8 for colored children. These were located where vacant schoolrooms were to be had, it being necessary to rent but a single room. It was understood by Congress when the appropriation was made that this was to be the initial step in the incorporation of the kindergarten work with the public-school system, and it was further understood that the experiment, if experiment it may be called, should be made in as many localities as was possible. The board of trustees created a kindergarten committee, consisting of three persons. Justice Job Barnard was the chairman and Mrs. M. B. Tulloch and Mrs. M. C. Terrell were the associate members of the committee. The board of trustees fixed the age of admission to these schools at 5 years. Although the kindergarten idea as understood by its advocates contemplates the beginning of the training of children by purposive effort younger than 5 years, it was thought that in the beginning of our work we would be safer in restricting the entrance age to 5 years. In a very few cases, perhaps, children under 5 years were admitted.

For a number of years there have been many kindergartens taught in the District of Columbia supported by benevolent societies and benevolent persons acting as individuals. Of these kindergartens a number had been taught in public-school rooms which had been furnished without cost to those conducting the kindergartens. The committee on kindergartens readily decided that the corps of teachers to be employed for the new schools might with propriety be selected largely from those persons who were known to have been successful in teaching the aforesaid kindergartens. A very satisfactory corps of teachers was thus easily secured. These teachers were given \$400 a year (\$40 a month) for their services. It was thought by the board of trustees that it would be just to give the same grade of salaries to kindergarten teachers whom we should decide to employ that is given to beginners in the primary-school work. Increases to these salaries, corresponding to those allowed primary teachers are in the minds of

the trustees also contemplated. No director of work was appointed, the management of these new schools being left in the hands of the superintendent. As the schools grow, however, the employment of a director will be found necessary.

The equipments of the kindergartens varied in cost. Those under my supervision, 10 in number—8 for white children and 2 for colored children—were equipped at an average cost of \$422.30. Each of these equipments included a good piano, the most expensive item in the outfit. The running expenses of each kindergarten—that is, for materials that perish in the using—was but a small portion of the cost of one of these schools. With each of these schools, however, an attempt was made to have an outdoor garden. In most cases this attempt was successful. In a few cases it was very successful. The experience secured by this effort will enable us to get more value out of this feature of the work in future years, it is believed. This outdoor garden, however, will be an expense which must be taken into consideration in the future establishment of schools of this kind.

It will be seen that our kindergartens, 16 in number, cost an average of \$750, in all \$12,000, as follows:

For salaries.....	\$5, 730. 34
For permanent equipment.....	5, 759. 10
For running expenses.....	505. 97
Total.....	<hr/> 11, 995. 41

I make the above statement somewhat in detail for the benefit of the board of trustees and also for that of the appropriations committees of Congress.

It was made known when an appropriation was urged for the establishment of kindergartens as a component part of our public school work that the system logically extended would be an expensive item of public education.

What the number of kindergartens should be in relation to the number of our primary schools to give the training they afford to all for whom it would be sought can not yet be estimated. There are no school systems in the large cities of the United States that can throw much light on the subject. Few cities have extended the system generally. The one city which has the most generally extended system of kindergartens (St. Louis) does not admit children under 6 years of age, and therefore these schools must have kindergartens which partake somewhat at least of the nature of primary schools.

When it is considered that there are now 147 first-grade schools in the District, and that most of the pupils in these schools (more than 90 per cent.) will be moved forward another year to give place to children now under 6 years, the age at which in the District pupils are admitted to the primary schools, it is easily seen that there is a field for a very large number of kindergartens; but whether the extension of the kindergarten privileges will demand as many kindergarten schools as there are first-grade schools is, as intimated above, a question yet to be solved. A primary school contains more pupils than a kindergarten does, according to the present arrangement; on the other hand, many parents are unwilling to send their children to school before they are 6 years of age or older. These and other facts that need not be enumerated in this place help to make the question of kindergartens, with respect to number, problematical.

If this kind of school is desirable at all, it is so for all parts of the city. The board of trustees, I believe, will not be content with having introduced kindergartens, but will urge their increase to the extent that every child whose parents desire to send him to a kindergarten may find a place in a good school of this character. The board in their wisdom have not been willing to establish a few cooking schools simply for the name of having done so, but have furnished these schools for all children in those grades where the subject is taught. A like statement may be made respecting manual training, and also respecting sewing and other exercises thought to be useful and desirable found in the schools of the District. The board will not be willing to restrict the influence of kindergarten work to a few or to only a portion of the children.

HAS THE KINDERGARTEN ANY VALUE?

A movement so profound in its character as that of assuming the control of even a small portion of the lives of the children of a community at the impressive age involved by that of the kindergarten may well cause reflection concerning the tendencies of this instrumentality. It is not a small responsibility to assume the authority of prescribing the activities and directing the acts of very young children taken from the bosom of the family. The responsibility of directing any person in education is not of small account; that of caring for the very young child is of very great moment, whether the interests of the person immediately affected or those of the community of which he is a

unit are considered. The responsibility of the schools to the community for what is done for the child in an upper grade or what it causes the child to do is small indeed compared with that which is done for the child of the first grade of school. As this "first grade" reaches down into the earlier years of child life the responsibility is increased.

These thoughts come to us with force when it is considered, as is now known, that the environment of the child during the early years of formative life, when the brain is so plastic as to be almost liquid, gives positive direction for good or bad to mental and moral character as much as or more than heredity does. In these remarks the influence and value of heredity are assumed. It is important now, however, to consider the effect and value of environment (this includes all teaching), for which alone schools are responsible.

Education must fail to produce any fundamental changes in the nervous organisation, but to some extent it can strengthen formed structures by exercise, and in part waken into activity the unorganised remnant of the dormant cells. No amount of cultivation will give good growth where the nerve cells are few and ill-nourished, but careful culture can do much where there are those with strong inherent impulses toward development. On neurological grounds, therefore, nurture is to be considered of much less importance than nature, and in that sense the capacities that we most admire in persons worthy of remark are certainly inborn rather than made.—*The Growth of the Brain*. Donaldson. (Charles Scribner's Sons, New York, 1899.)

Man is, to a far greater degree than is ordinarily realized, the servant of heredity. It seems to us an incontrovertible fact that every living creature, at any given moment, is swayed infinitely more by the *totality of its heritages* than by its environment. No one can possibly deny this so far as plants and most animals are concerned. Nor, if one look below the surface, can it be denied of the higher animals and of man. Happily, the average man, with his present constitution, has his diverse heritages so proportioned that we may repeat that his life and character (in customs, morals, and religion) are vastly more influenced by environment than by heredity.

The standards for estimating the life and character of men, namely, human customs, morals, and religions, are such recent acquisitions, *geologically* speaking, that they have, as yet, very slightly, if at all influenced the germ-cells. They are acquired (somatic) characteristics, and not congenital (germinal) qualities. They are preëminently the creations of environment. If the infants of a Catholic family which is descended from a long line of Catholic ancestors were to be placed and retained in a purely Mohammedan environment, heredity would carry no Christian customs, morals or religion into that environment, but, on the contrary, the Mohammedan surroundings would instill new customs, different ethical ideas, and a different religion. This illustrates how very feebly indeed are germ-cells correspondingly impressed by pure acquired characters. *It is almost certain that the translation of*

somatic changes into germinal changes is appallingly slow. As far, then, as social customs, morals, and religion are concerned, the average man is, in our opinion, infinitely more the creature of nurture than of nature. But, as far as his temperament, his emotional nature, his judgment, his strength of will, in short, his physical and therefore his mental constitution, are concerned, he is *almost* absolutely the creature of heredity. The equilibrium of qualities or heritages in the average man, resident in a given, stable community, is in harmony with the average customs, ethical ideas, and religious beliefs of that community.—*A First Book in Organic Evolution.* Shute. (The Open Court Publishing Company, Chicago, 1899.)

At this impressive time of life all things surrounding the child react on him to change him and make his mental and moral character. If at any time when the child's mind and character are forming he is examined for determining his likes and dislikes, what his tendencies and aptitudes are, that one may know how to deal with him or what can best be done for him, that which is ascertained as the result of this inquiry shows chiefly where he has been since birth. The information secured shows not what he has inherited, but rather where he has been, what he has been made to look at and to see, what he has been made to do, what has been said to him and what he has been made to say, and what he has been made to believe, and what has been given him to imitate, and reveals also to one who is able to discover them the circumstances and conditions under which he has been made to do, to say, and to believe, affecting and building a subconscious self.

No observations are of much importance which are not accompanied by a detailed statement of the personal influences which have affected the child. This is the more important since the child sees few persons, and sees them constantly. It is not only likely—it is inevitable—that he *make up his personality* under limitations of heredity, by imitation, out of the "copy" set in the actions, temper, emotions of the persons who build around him the social enclosure of his childhood. It is only necessary to watch a two-year-old closely to see what members of the family are giving him his personal "copy"—to find out whether he sees his mother constantly and his father seldom; whether he plays much with other children, and what in some degree their dispositions are; whether he is growing to be a person of subjection, equality, or tyranny; whether he is assimilating the elements of some low, unorganized social personality from his foreign nurse. The boy or girl is a social "monad," to use Leibnitz's figure in a new context, a little world, which reflects the whole system of influences coming to stir his sensibility. And just in so far as his sensibilities are stirred, he imitates, and forms habits of imitating; and habits?—they are character!—*The Story of the Mind.* Baldwin. (D. Appleton & Company, New York, 1899.)

The information about the child secured by an examination is not proof of the likes, dislikes, and tendencies of childhood at the age of

the child examined, but only of the likes, dislikes, and tendencies of this child, because they show chiefly his culture rather than his heredity. (If it be contended that examinations show more of heredity than I am willing to admit, they would then not show the tendencies of childhood in general, because of the great variation in hereditary tendencies even in the same family.)

Of late years no study in the practical effects of heredity has carried with it a greater amount of popular belief than Dugdale's account of the "Jukes." They were a family of criminals and paupers whose history dates back to the first half of the eighteenth century. They lived together in a section of the country which has been called "one of the crime-cradles of the State of New York." They were vicious, lazy, addicted to all manner of excess and crime. The total number of persons in this family and its descendants has been estimated at twelve hundred. Each generation handed on to the next all the crime and vice that the mind of man could possibly conceive. For the most part they herded together in roughly made shanties, where they lived a vile sort of life in common. With this place as a base of supplies, they preyed upon the community at large, distributing their evil influence in a way that is hard fully to realize. Generation after generation showed similar traits of disease, of viciousness, licentiousness and crime. An elaborate sociological study has been made of them, with the conclusion that the children were modeled after the parents. This family has pointed the moral in many discourses on heredity; they have served to fasten the idea in the minds of many people that in human beings the course of inheritance of characteristics is direct; that there is an inevitable fate which decides a child's mental and physical constitution, even before birth.

Such a conclusion is more than rash, and a fairly careful consideration of the facts will show how false it is. In this crowd of unfortunates there was no possibility of intercourse with decent citizens; the "Jukes" children were shut out from every humanizing influence; they were pariahs, constantly suspected, constantly distrusted, against whom the hand of every man was virtuously raised. Their children were born in the midst of the worst possible surroundings, and inhaled the odor of all manner of vice long before they knew what the boundaries between good and bad are. * * * With every example marking the way to crime, with every obstacle standing in the way to virtue, it would be almost miraculous if they were reputable. As the author himself has said, "want, bad company, neglect, form the environment that predisposes to larceny." When these factors are increased by all known means, one has a predisposition that becomes magnified into a salient trait.

Curiously enough, Dugdale has unconsciously given instances of the method by which the viciousness of the "Jukes" might have been prevented, by which these seemingly hopeless characters might have been reclaimed. He mentions a married pair of this family who removed from the rest to where they were not so well known. Naturally, the outlook changed, they left the ranks of beasts, and took their stand among human beings. Their offspring developed in much the same way as the other children of the new neighborhood, as many children of a fairly

respectable parentage. As the author says: "This pair thus measurably protected themselves and their progeny from the environment of eight contaminating persons, all immediate relatives, whose lives were, with few exceptions, quite profligate." He mentions still another case that is equally instructive. One of the "Jukes" women, a harlot and criminal, died in the poor house, leaving a daughter of the age of one year behind her. This child, according to hard ideas of heredity, should have year by year shown increasing tendencies toward evil ways, and in all likelihood, if she had remained within the taint of her family's influence, she must have done so; but fortunately, a lady of wealth adopted her, gave her some of the care which she needed, and at the time of the report—when she was old enough, according to the family standard, to show vicious tendencies—she was seemingly quite normal. If this happy change in her fortunes had not occurred, if she had remained with her mother's family, "which must have been sufficient without heredity to stimulate licentious practices," there is very little doubt of what her fate would have been. And then there would have been still another case of the inexorable law by which the attributes of the parents show themselves in the children. In similar ways it would be easy to multiply such instances in other families, where children of vicious birth, when adopted into finer surroundings, blossomed out into useful men and women, and in like manner, one can find enough cases of well-born offspring degenerating far below their natural plane, when their atmosphere was such as to make the falling off logical.—*The Development of the Child*. Oppenheim. (The Macmillan Company, New York, 1898.)

It is known to the primary teacher who understands his work and teaches the child rather than the subject, that the child from the poorer home who by circumstances has been compelled to provide the means for his own amusements by making his own playthings, dolls of the ends of broom handles and wagon wheels of spools emptied of their contents, or has been forced to aid in home affairs by caring for younger brothers or sisters, or by aiding in washing and ironing for instance, by building fires, carrying water, and by helping as assistant in various ways, learns his first lessons in reading readily, spelling accurately, and writing well, much more quickly than does the child from the better home for whom toys have been furnished and everything that he has played with or used for his own gratification and amusement has been adjusted to his whims and operated for him by servant or parent. (In the case of the first-named child the motor element has been developed by purposive self-direction.)

Later, however, by months or years, as the case may be, when the two children have adjusted themselves to the conditions of the school and the child from each source begins to help himself, begins to use his efforts in purposive seeing, and for accurate talking and other representation, with brush and pencil, or some means of construction including his fingers and instruments furnished him, the teacher finds that the

child from the more fortunate home progresses much more rapidly than the other. This is noticeable when he begins to read new matter and especially when he talks and writes, and by his increased power to invent in construction. His experiences have given him much more to learn with than the other child possesses. I do not mean more brains. I write experiences. His experiences enable him to see and understand qualities, situations and uses that the other can not see. Only by experiences with which to understand do children readily get knowledge from books or from what is said to them. Without experiences for interpreters, these, the words of others, must be largely dead letters to the children, no matter how well they may be made to recite them, how accurately they may be made to spell them, how elegantly they may be made to write them. The teacher who remains long enough in the place to test his work, and who teaches according to correct psychology, knows that the most dulling (wooden making) exercise that the child can be made to engage in, physically and mentally, is to learn words unless they represent what he knows or represent that which may be interpreted by what he knows from experience.

The principles involved in what has been said and quoted in the foregoing are in essence the primary *raison d'être* of the kindergarten. If all homes would furnish properly selected environment, and if these influencing conditions could be made sequential and purposive there would be less need of the kindergarten than there is. Indeed it is not difficult to believe that the child would be much better off at home until he has reached the age of 7 or 8 years at least than he can be at school, if the home would furnish more definitely correlated effort purposively directed. But the one kind of home, that in which the child is intrusted to servants, does not furnish these necessary conditions, while another kind of home, that in which one or both of the parents are engaged in bread-winning labor, can not furnish the environment. It need not be said that in ignorant homes the desired conditions are not found.

The kindergarten, when properly equipped and intelligently conducted provides the right kind of environment for the child (this is its first important duty) and arranges it (adjusts it in point of time and circumstance) for effects that are desired. It arranges environment, as stimuli, for direct compound effects on mind organs through the different senses. This not only enriches the mind as a whole but also enriches and strengthens each of its associated parts by uniting them and thus establishing a community of effort and interest. It is this com-

munity of interest, this correlation and concentration of effort, that the varied activities of the kindergarten, as an educative force, are primarily intended to accomplish. The child during the entire formative period is insuring against atrophy or nondevelopment of brain cells; is developing sense centers (inherited possibilities), and is broadening and unifying his mind (sense centers) by energizing communications (nerve fibers) among the parts thereof in proportion to the variety of stimuli furnished his mind through the senses, and also according to the uses made of the reactions thus secured by the exercise of the motor factors of mind and body. He is making the beginnings of a mind, laying the foundation, so to speak, that is broad or narrow, passive or motile. If the environment is meager and poor in variety and coloring, the mind, by virtue of the development of fewer brain cells, will be correspondingly narrow and without richness of tone and color, and if concepts received are secured by self-activity and are realized in application to useful and interesting products in response to his inherited social and economical tendencies and opportunities, the child will develop a mind of affairs, of acquirement and strength. In the absence of exercise of the motor element, a mind simply of acquirement will result.

Thus the impulses reaching an expressive centre, and proving too weak to cause the discharge of it, may still prove efficient if combined with the corresponding impulses from another sensory centre to which the object also appeals. It is therefore the passing of the impulses from all the sensory centres stimulated by the object that gives the basis for the most perfect response. Clinical studies of the kind furnish grounds for the idea that the presentation of an object to any one of the senses revives the mental image of that object in terms of the other senses which may be, and formerly have been, excited by it, and that the more vivid these associated images, the more complete and clear is the conception. As the possibility of forming the extra images is curtailed, the conception becomes weaker, more special, and less reliable.

When the sight of the bell causes it to be named, the changes in the brain are not duplicates of those occurring when the sound of it has led to the same reaction. In the two cases the same expressive centres have been differently roused by *different* sets of fibres, one from the auditory and one from the visual centres, and the secondary revivals have been correspondingly varied. The bearings of these facts are very wide.

* * * The working value of the mental images appears also as dependent on the number and balance of the secondary sensations which accompany them. The greater the number of these the more certain and precise is our thought. For this reason the development of the intelligence is associated with the perfection of more than one sense organ, whereas reliance on a single avenue of sense, while it may lead to very precise reactions graded in accordance with the intensity of the single

sort of stimulus, leaves us without those fringing sensations which form the basis for distinction and comparison.

In biological equations the values of the different factors are often open to wide variation. We have insisted on the three-fold composition of the central system, one factor being afferent or sensory, another central or distributive, and the third motor or efferent; each one of these divisions represented by distinct anatomical cell groups. It is readily seen that a high degree of responsiveness among the central cells gives us the intellectual type of reaction. Where the efferent portion is well organised, we have the anatomical conditions, or the man of affairs or action, while exaggeration of the afferent or sensory component leads to a merely passive existence, or to hysteria, according to circumstances.

Connections between the exercises of formal education and brain change have not been demonstrated. It is not known how a year's schooling affects the central system, and it is not probable that we shall soon arrive at facts of this sort. Available, however, are the facts of anatomical growth during this period, and to these plausible explanations have been given.

The aim at the moment, therefore, is to determine what limitations anatomy places to the educational process, and thus to obtain a rational basis from which to attack many of the pedagogical problems. It appears probable that the education of the schools is but one, and that, too, rather an insignificant one, of many surrounding conditions influencing growth. The average individual is first subjected to some formal training when about three years of age. At this time the number of cell elements is complete, and the history of future organisation has been in its broad outlines determined by their first arrangement. Examination shows that but a fraction of the elements have begun to develop, though growth is everywhere visible, and some of the elements have attained almost their full size.—*The Growth of the Brain.* Donaldson.

The heritage (society) that influences the child during his entire formative life must be far greater than that which the school can provide. It is the aggregation of social life of which he is a part expressed in the term "the civilization."

The serious illness that threatened her life (Helen Keller) at the time left the child of nineteen months with only those organs of sense unimpaired which we are accustomed to regard as the lower senses in man,—those of touch, of taste, and of smell. Her high degree of intelligence to-day—which enables her to converse with rare thoughtfulness and understanding not only in English but also in German and French, and to form a judgment quite her own of her surroundings, of events, and of persons—must have been entirely formed by impressions received through them, and, we may assume, by those that date back into babyhood.

Among her many accomplishments that for appreciating music is one of the most astonishing. She perceives it by feeling the vibrations of the instruments with her fingers placed lightly upon them, and even through the floor, when, as in one instance, it was covered with a thick carpet. For she is not only conscious of it, but is without a doubt swayed by its rhythm, either depressed by a melancholy strain like "The Old Folks at Home," or "Home, Sweet Home,"

or elated and pleasantly excited by a waltz or a galop. I have seen her deeply affected by the female voice, which reached her through her fingers touching the throat of the singer. On another occasion she likened a dance played on the piano from the manuscript to "running water." The simile appeared to all of us as very apt. Three months later she again made the same comparison upon hearing the same composition for the second time. She has therefore created a centre for musical impressions through the sensations of touch, just as we have one for the same order of impressions, with the important difference that ours is connected with the ear, while Helen Keller's is connected with the nerve-endings in the skin and muscles. Were it possible to recall true aural impressions in her case, through the medium of touch,—aural impressions that must have been received, of course, before her nineteenth month,—it would not only prove the force of subconscious impressions (being infantile), but would suggest the interesting question whether in such cases a connection is not established between the one centre, that of hearing, and the other, that of touch, and thus create a new kind of mental process, peculiar to such cases.

With this purpose in view I wrote to Mrs. Keller, who kindly sent me the titles of two plantation songs, which were commonly sung in her home in Alabama when Helen was a baby, but are not now generally sung, and which I could procure only in manuscript from the South. These tunes I had played upon the piano while she stood beside the instrument with her fingers resting upon its wooden frame. Care was taken, of course, that she should know nothing of my intentions, and that she should be taken unawares. The effect was striking. The young woman, now just entering upon her sixteenth year, became greatly excited, laughed and clapped her hands after the first few bars of "Way down in the Meadow a' mowing of the Hay."

"Father carrying baby up and down, swinging her on his knee: Black crow! Black crow!" she exclaimed repeatedly, with manifest emotion. Miss Sullivan and several ladies present were greatly astonished at the result. On hearing the second song, "The Ten Foolish Virgins," the same effect was produced. It was evident to all those who were present that the young lady was carried back to her early surroundings, even into the time of life when she was carried about by her father; but we could not find a meaning for the words "black crow." I considered it prudent not to question her, but applied by letter to her mother, who was kind enough to send an early reply. Mrs. Keller said: "What you wrote interested us very much. The 'Black Crow' is her father's standard song, which he sings to all his children as soon as they can sit on his knee. These are the words: 'Gwine long down the old turn row, something hollered, Hello Joe,' etc. It was a sovereign remedy for putting them (the children) in a good humor, and was sung to Helen hundreds of times. It is possible that she remembers it from being sung to the two younger children as well as to herself. *The other two I am convinced she has no association with, unless she can remember them as she heard them before her illness.* Certainly before her illness her father used to trot her on his knee and sing the 'Ten Virgins,' and she would get down and shout as the negroes do in church. It was very amusing. *But after she lost her sight and hearing it was a very painful association, and was not sung to these two little ones*" (the younger children).

It was quite clear that the child, after she was nineteen months old, might have received an impression of the "Old Crow" song when it was sung to the younger children, through the peculiar vibrations communicated to the floor of the room; but the other two songs could only be perceived through the ear when she was a baby younger than eighteen months, and could hear, and are therefore a part of her earliest memory. We are therefore justified in assuming that the vibrations of the piano from the two plantation songs, communicated to her by the touch, over fourteen years later, have travelled to the centre where her early aural impressions are stored up, and that they in their turn reawakened the memory of the Old Crow song, which she had heard before her illness, and possibly also had felt by vibrations afterwards when it was sung to the younger children.

It appears to me that this striking instance proves, beyond a doubt, and as nothing else could more, the persistence of early impressions, as well as the intimate connection that the centres of two different senses, though physiologically related in many ways, may assume in certain cases. The mental quality of sound thus conveyed by vibration alone must, it is evident, be of a peculiar nature, different from such sensations of the normal person, for it is composed of elements of the immediate skin impression, associated with those of the earlier ones deposited in the normal sound memory.—*The Subconscious Self*. Waldstein. (Charles Scribner's Sons, New York, 1898.)

In these now well-known principles of mind development, mind starting, the kindergarten has the strongest reason for existence. It exists for arranging environment and directing a purposive attention toward it for correlated effect, thus making interesting activity (play) naturally yet in a higher and in the most profitable degree educative.

The kindergarten is not occult. It should be as simple as the cultivated home and as unobtrusive on the mind of the child as the daily influence of an intelligent and refined mother in so far as the child is conscious of it as an instrumentality affecting him. The kindergarten exists for the purpose of broadening and directing the child's experiences with things, stimuli to which the mind reacts, and in associations that cultivate, with the instrumentalities and products of social life, and also for broadening his motor experiences in social intercourse, not only by engaging with others in plays and games, but by contributing his thought and desires to a common stock.

Millet knew well the concentrated effect of early experiences on the character of mature life when he conceived *The Angelus*. The art in this painting is the manner of representing a psychic truth or principle. The picture is a most valuable study in educational psychology, to which it is a rich contribution. It shows the parent and the teacher, seeing how early impressions persist, the supreme duty of knowing how the very young child should be cared for and taught if it is hoped to make of him in mature life what society wants him to be.

But with the appalling responsibility implied by the foregoing to discharge, the kindergarten must be right. It must be provided with health-giving appointments. The room must be properly lighted and ventilated. Opportunities for outdoor life must be provided. Outdoor gardens must be provided and carefully developed. The tones of the kindergarten, its colors, its embellishments, must be true and pleasing. The tones that are heard there must be heard under circumstances that please also the eye, and the harmonious colors that are examined must be seen under circumstances that please also the ear. Even the atmosphere of the room (there is a temperature sense) and the reaction of the vegetative organs help to determine the quality and strength of the child's mind as it is developed and affected by his environment.

I thought the sparrow's note from Heaven,
Singing at dawn on the alder bough;
I brought him home; in his nest at even
He sings the song, but it pleases not now;
For I did not bring home the river and sky;
He sang to my ear—they sang to my eye.

—Emerson.

The most influential item of environment is the child's teacher. This is truer of the very young child than it is of the one that is older, for the influence of the teacher decreases with the increasing age and strength of the child. It is a common thing for parents to speak of the pleasure their children take in "playing school." The children imitate actions and even tones of the teacher. The praising and cautioning, the upbraiding and faultfinding, are all reproduced; even the mode of sitting, standing, and walking are given. The most difficult question for the board of trustees to solve after securing the means by which kindergartens are made possible is to obtain teachers whose qualifications are what they ought to be. The board will undoubtedly find it necessary to train the kindergarten teachers, as training of teachers for our primary schools was found necessary. By fixing the qualifications for entrance to the training class we may be assured of the knowledge and culture other than that of technical training required in kindergarten work.

THEORY OF THE GENERAL WORK OF THE PRIMARY SCHOOLS.

The foregoing remarks on the subject of kindergartens lead logically to the contemplation of the school in general and its work, but especially that of the primary school, showing the development of

education succeeding the kindergarten beginning. While it is not practicable to present these important subjects at great length within the limits of an annual report, it is presumably appropriate to offer a few suggestions relating thereto. Perhaps it is duty to represent at this time the processes of education now in vogue in the schools of the District.

The processes of education to-day throughout the world and particularly in America are in a state of rapid transformation or evolution. People of all classes, especially those who think, in contemplating the schools, influenced by experience with them, seeing the products of the schools in the lives of their children as well as realizing themselves in many instances as products of these schools, have seen in them what they believe to be defects and have not been slow to criticise them. For two or three decades, but especially within the last ten years, the public press of every kind, the rostrum, the pulpit, and numerous persons having the ears of the public have helped to make known the shortcomings of existing methods of education. The contention has been in part that the schools are formal; that the studies and methods are disciplinary rather than nourishing; that mind-nourishing studies are not found in the curricula in their just proportion. By the medical men the schools are held blamable for the impairment of the health of the children. This latter criticism is perhaps the most important of all that are made; at least it has led to more unrest than any other, because it affects the happiness of the home and disturbs domestic tranquillity more than any other.

The evolution is in rapidly increasing progress. It is not difficult to believe that one of the most important movements that has ever affected human society is now taking place—a revolution in the processes of education, as also in the conception of the purposes of education. This revolution has been induced in part by more accurate information relating to mind and to the phenomena of its growth than was before possessed. Scientific investigators, students of mind, together with investigators in the department of institutional life and its growth, are on the one hand discovering the nature of mind and mind action, and on the other hand tracing the relations of institutions and social life to mind growth and the growth of knowledge. These discoveries, announced from time to time and becoming known to and understood by thinking people, have made a profound impression on society. The enormous development of free schools, with the accompanying expense,

and the consequent prominence they have taken in the social make-up, especially in America, is a strong factor producing the revolution. Another factor, alluded to above, important enough to be repeated, is the alleged inadequacy of the efforts of the school to develop the citizen as an efficient, intelligent, broadminded being, adequate to discharge the duties and enjoy the privileges of his time without ruining his health by their processes, and thus defeating the very purpose for which efforts in education are instituted.

The unrest in the public mind concerning the schools has led to effort on the part of school men to remedy the defects complained of. Public opinion has demanded an enrichment of the course of study and at the same time better care of the child's health. Many movements have taken place for the purpose of correcting the evils that have been pointed out. Although the movement for a change has been very marked in America, it is not much more noticeable here at the present time than it is in England. But much that has been done is partial and tentative, only experimental, because in most instances what is done is invented for the accomplishment of a narrow purpose only (the preconceived notion of some one in authority of what should be accomplished by the schools).

The changes now taking place, so evident and general, are of interest in that they reveal the way in which the schools have grown in the main from their beginning. New growths are patterned after the old, which is but natural. Educational methods have grown to what they are largely by the adoption of processes invented for the accomplishment of narrow purposes in too many instances, and naturally, also, in many instances, purposes not having much educational value as culture products. It is believed, for instance, by some person of influence that a certain result should be accomplished by the schools, and straightway some one has invented or caused others to invent a way for doing it. "The end is lost sight of in attention to the means."

The school, when it began to be criticised a few years since, was an aggregation of processes, each of which had received its character more by the influence of that (the logical relations of its parts) which was to be analyzed (portioned out) and given to the child than by the influence of an understanding of the mind of the child or of a broad outlook on the true purpose of school. Humanity had lost its place. The subject being taught engrossed the attention of the teacher more than the condition of the child who was to be affected. From force of precedent teaching was in the hands of those who had become expert

on the purely mechanical side. Results were tested by examinations and rated in numbers in the belief that this could be done as the value of an acre of wheat can be determined, by measuring or weighing the wheat and thus ascertaining the number of pounds of flour the crop will produce. The training of teachers in the past has too often consisted chiefly in giving them devices.

Unrest showed itself among many persons in opposition to the practice of subjecting the minds and lives of all children to the same processes and to making the same demands on all.

Those who taught school naturally continued their inventions of processes to correct evils that were pointed out. Machines for thrashing wheat or for manufacturing cloth had been made for cheapening the cost of production. Why can not devices in education be employed for labor-saving purposes? it was thought. The industrial idea sought to satisfy the commercial idea which permeated society, including the school. The school took its character under the influence of a rapidly growing commercial and mechanical society.

In the development of the civilization of man his mind has perforce developed first in the direction of economical and governmental life. Man had to learn first how to subsist and, second, how to live with his neighbors. The first institutions of society were on these lines. Educational institutions have been the last to be developed. So the growth of the school by the aggregation of mechanical processes was natural and perhaps unavoidable because of the lack of knowledge (1) of the nature of mind and (2) of the means by which it is made to grow.

This mechanical character developed to such a degree that the people would stand it no longer. It is noteworthy that the revolution started with the people, not with those who were teaching the schools.

There have been many exceptions to the broad assertions above made, the most prominent of which in all the history of human development is that of the kindergarten in its purity. Yet the kindergarten in the hands of persons who do not understand the nature of mind and the philosophy of the kindergarten in its relation to that nature is used only as an aggregation of processes which, while they may not always do harm, can do little good and will not accomplish what a correct application of kindergarten work will secure.

What I mean by a process—the machine in education with which to accomplish a purpose—is illustrated by the addition of manual training to the work of the school in so many places to-day. By this also

may be seen what in too many instances exists in the minds of those who arrange and control curricula. In recent years it has come to be known, or at least to be believed, that the motor factor in the growth of mind has been neglected in our educational processes. Men have come to believe this (1) by getting a more perfect knowledge respecting the growth of mind, (2) by understanding better the causes of mental phenomena, (3) by observing the development of civilization, (4) by studying themselves and others, cooperating in the making of institutions, and taking part in the construction of the instrumentalities of business, social, and governmental life. Men saw the one-sided character of the training obtained in the schools.

Men who do not teach but yet observe the result of teaching (these were the first critics the school had)—scientific, thoughtful men—saw that social life had grown into being and complexity by getting knowledge through discovery and invention and by giving to society. These men saw that getting knowledge and strength involves the motor factor in mind development and that the using of knowledge and strength for the benefit of society requires invention and construction, which involve another kind of motor activity, physical instrumentality. They further saw that all existing knowledge has been made or discovered, and that the use of this has resulted in the making of society. Men of America especially have seen a continent developed from wild nature into the most active and efficient and far-reaching civilization that has yet existed. They have seen, too, that this has been done by the correlation of motor activities combined with the result of the reaction of environment, itself made in part (induced) by motor activity. To involve the motor factor, therefore, in the education of the child, a process of manual training was invented and put into the schools, as for instance, *sloyd*. It is not uncommon to hear distinguished educational persons of to-day say that all subjects taught in school should be accompanied by or supplemented with motor activity. These expressions show the tendency to search for the machine for the accomplishment of education.

The result, however, of much that is done is not that relief is given by changes in education, but, on the contrary, that other burdens are superimposed; the curriculum is crowded by additions of new kinds of work.

The old system of education educated adequately at first, perhaps, before the enormous increase of the knowledge resulting from scientific research of recent years. The old school, however, did not teach all

the children. It taught, indeed, only a few. And the teaching it did, however efficient it may have been, was logically only supplemental (by accident). The pupils were really not indebted to what they learned at school for the valuable part of their education, as recent knowledge of the nature of mind clearly proves, but were indebted for this rather to the training they received by their home activities while attending the school and by conditions of life precedent to school life. The school gave them very little power of purposive thought and action. The power they acquired was obtained by the necessities of home life, causing labor and effort, and developing purpose and interest in action. This (experience) made them competent to get all the benefit (largely formal) that the school afforded. Hence the value so often ascribed to the "old-fashioned country school." Going for the cows and driving them home, opening the gates or letting down the bars, closing the gates or putting up the bars, and keeping the cows out of the corn on the way home, influenced by the responsibility belonging to the acts performed, were processes of education superior to those the boy got in the school (learning the forms of knowledge chiefly); but when these were supplemented by the teaching of the school, however old-fashioned it may have been, the boy got an education that made him efficient, and manly, and trustworthy. The boy of 12 years, sent 10 or 20 miles to mill with a grist to be ground, who, when the wagon tongue is broken by a sudden turn of the oxen into a pool of water, is forced to mend the broken tongue by some hook or crook—splice it, it may be, by use of splints stripped from fence rails and bark stripped from young trees, or ropes taken from the heads of the oxen—and go on with his load to the mill, have his grist ground and get home on time, is doing that which gives him the beginning of power which, supplemented by form-getting at the school, tends to fit him for efficient work and the discharge of heavy responsibility. Learning from a book in the absence of these or kindred experiences for interpreters will not produce the boy who will found a business or be very helpful to others who can. Very many of the great men of this continent have been made by the necessities of life incident to the clearing of wooded land, the development of unshorn prairies, the bridging of streams, the subduing of Indian tribes, and the destruction of savage beasts, supplemented by meager education obtained from schools.

Necessity is indeed the mother of invention. It would be difficult to measure the far-reaching educative value of the power of construction that arises from the mere fact that the child has not at hand the tool,

the toy, the article that he needs in his work, his play, his stage, his little world of great undertakings. The great Goethe in his childhood days all unconsciously gained for himself the best means of developing brain and body, giving himself up, body and spirit, to the construction and acting of all his little plays and operas. In Wilhelm Meister, in speaking of his boyhood days, he says:

It was natural that the operas, with their manifold adventures and vicissitudes, should attract me more than anything else beside. In these compositions I found stormy seas, gods descending in chariots of cloud, and, what most of all delighted me, abundance of thunder and lightning. I did my best with pasteboard, paint, and paper. I could make night very prettily; my lightning was dreadful to behold; only my thunder did not prosper.

The decorations of my theater were now in a tolerable state of completeness. I had always had the knack of drawing with compasses, clipping pasteboard and coloring figures; and here it served me in good stead. But the more sorry was I on the other hand, when, as frequently happened, my stock of actors would not suffice for representing great affairs.

My sisters, dressing and undressing their dolls, awoke in me the project of furnishing my heroes by and by with garments which might also be put on and off. Accordingly, I slit the scraps of cloth from off their bodies, tacked the fragments together as well as possible, saved a particle of money to buy new ribbons and laces, begged many a rag of taffeta, and so formed, by degrees, a full theatrical wardrobe, in which hoop petticoats for the ladies were especially remembered. My greatest pleasure lay in the inventive part and the employment of my fancy.

The recreations of youth, as my companions began to increase in number, interfered with this solitary, still enjoyment. I was by turns a hunter, a soldier, a knight, as our games required; and constantly I had this small advantage above the others, that I was qualified to furnish them suitably with the necessary equipments. The swords, for example, were generally of my manufacture. I gilded and decorated the scabbards, and a secret instinct allowed me not to stop till our militia was accoutered according to the antique model. Helmets, with plumes of paper, were got ready; shields, even coats of mail, were provided.

And all the time the child grew and became a master over circumstances, growing more capable, more alive to existing conditions, overcoming obstacle after obstacle, experiencing the pleasures of construction, the satisfaction that comes from the knowledge that one is able to mold circumstances and is not a mere puppet.

The physical activity of the child, the contact of the boy with things, the concomitant activity of his mind and hand tended to keep his whole being alive to experiences of all kinds, and finally gave him to the world the broadest, boldest man of experience of his time. Goethe in his plays gleaned from things by his contact with them the same educative training in kind as do so many of our great men who come to us

made great by the stern necessities of country and farm life, masters over circumstances, doing the work of machines they do not happen to own, constructing the implement that is not at hand, monuments in themselves of the power of mind over matter and conquerors of fate and stern necessity.

The reason that the country or village school of to-day is less efficient than the one of older times, if it is so, is because the civilization is different, society is not the same. The child does not come to school with the same kind of development, as opportunity for home development is not given him. The work of the farm is done by machinery, and although operating and caring for machinery are themselves educating, these benefits are in many cases restricted to a few employed experts or to the older members of the family. The farmer no longer goes to mill; he sells his wheat at the railroad station and buys his flour by the barrel or sack in the town. He no longer makes butter; he sells his milk (by the pound) at the factory and buys his butter at the grocery store. Another condition affecting old country-school life, and giving it its apparent value, is neglected when the benefits of the country schools are thought of. I mean the ages of the children attending the school. They were by many years in the average older than children attending primary schools of to-day, and were, therefore, in condition to be submitted to severe mental strain in securing knowledge from books without probability or even possibility of harm therefrom, so different is the mature mind from that of the young developing mind. But it is well known to every man that attended the old-fashioned schools that the majority of those attending them never got beyond the ability to do indifferent reading, poor spelling, and awkward writing. They lived and died never knowing perhaps that they were not educated. What is very significant and instructive is that for the most part they became useful and respected members of society.

As time passed even the "country school" was unsatisfactory, especially to those fortunate ones who under former conditions of social life would have become leaders. These sought opportunity in the village school, where new branches of education had been introduced and where, as it was said, modern methods were employed. In the village school the change had begun. One by one new lines of work demanded by new knowledges and new activities in civilization were urged and new branches were added to the courses of study.

It must be remembered that these changes all took place in response to the demands of the people, the school authorities being only the

instruments. The way these changes have taken place may be represented somewhat as follows:

It is found, for instance, by some one who interests himself in society and its growth that children pass through the schools committing lessons to memory, reciting texts (forms of knowledge), yet do not know the primary workings of the government affecting them, in city, county, state, or nation. The consensus of opinion is that patriotism should be taught in the schools. But patriotism that persists in emergency can not be taught without some knowledge of what patriotism means. This involves some knowledge of the workings of government and what government means, whence it came, what it is for, what it does, and how it does it. The conditions seem bad. Critics declare the schools a failure.

Superintendents suggest a course of work to correct the error. The board of education introduces a text-book on the subject of civics.

This looks right on paper and sounds right in the ears of the public, but it too often proves only a new exercise superimposed.

Another intelligent person discovers that the child leaving the grammar school knows nothing about the working of the power that drives the street car from one portion of the city to another; that he knows nothing of the action of heat or light affecting his daily life. Then it is asked, Why should a boy go to school five years, eight years, ten years, or longer, spending his entire time learning to read, to spell, to write, to cipher, to bound states and locate capitals, yet know nothing of the phenomena affecting his daily life, know nothing of the pleasures incident to the contemplation of improvements that change the nature of his surroundings every year, know nothing of the reasons for the advancing civilization that affects him? Then the schoolmaster says the study of physics should be introduced into the schools—should be taught in the grades—and the board of education adopts a text-book on this subject. This proves also to be a superimposed study.

Another enterprising person who writes for the magazines discovers that while the boy can bound states, locate capitals (black spots on the map), and trace the sources of rivers from memory he yet knows nothing of the logic of geography, either physical, commercial, or social. It seems like a glaring defect in education that a child should be taught, for instance, the source and direction of the Mississippi river and the names in order of all the rivers that empty into it and the boundaries of all the states in order that are drained by it, yet learn nothing of

causation either for the existence of rivers, the locations of cities, or the relative populations of such cities; and so the superintendent, impressed by the magazine article he has read, plans to have physical geography (physiography) introduced into the lower-grade schools, and in connection with it he plans the extension of the study of physics, by means of which the child may learn how rain is formed, how valleys are made, and how streams result, cities grow, centers of population are determined, and large masses of population become. A book is introduced for this purpose. The authorities are made happy because they believe that now the school is to be improved—it is to be a modern school—new methods of instruction are being introduced. But it is soon discovered that only a new burden has been superimposed, because the grind of learning to read, to spell, to write, to speak and write English, each from a book from which nothing else is learned, learning geography from a book put into school for that single purpose, goes on. Every one of the new things that has been added is a superimposed burden. In a somewhat similar manner music, drawing, and all other additions to the curriculum have been made. Parents say, Our children have too many things to learn; and teachers say, We have too many things to teach; and in speeches and sermons and magazine articles it is declared that the children try to do too many things, and thus dissipate their minds and learn nothing well. Thus has the school grown to be what it is. The demand for the additions named above was made by leaders of public thought, insisting that the course of education should be enriched. All these movements indicate the extent to which the revolution in education is on and the momentum that it has acquired. Yet little change is made in processes of teaching. Memoriter work predominates. The grind continues.

Some persons have tried to solve the problem by attempts at correlation and concentration of studies, doing much good thereby in many instances. In all the criticisms that have been made few persons have offered any suggestions for improvement, except occasionally it has been declared when comparing the results of education to-day with those secured by the old school that the schools must cease to evolve and must go back to the old ways of teaching. This from the very nature of mind and the advancing force of civilization will be found to be as impossible as it would be to reverse the flow of the waters of the rivers.

In the schools of Washington for many years an effort has been made to study the evolution in progress and to understand it, and to

help to solve the problem, namely, How can the child be educated to understand, appreciate and enjoy, and at the same time be trained to become an intelligent actor in the civilization of which he is a part, and not break down in health?

It is one of the imperative duties of educational endeavor to seek modes of education that will conserve the equanimity and thus the health of the nervous system of the child. This thought is made important by the added requirements of the school made by public opinion because of increased knowledge.

While it was believed that there was cause for criticism concerning the methods and requirements of the schools and that relief should be sought, yet despite this it was plainly seen that there was demand for a broader intelligence, for a more rational understanding of things on the part of the pupils, as also for a better physical development and for direct motor training.

It was seen that no satisfactory change could be effected simply by a multiplication of studies, as this would result in putting additional burdens on the schools, nor could it be effected by an increase of time given to school work. Both of these, it was seen, would but augment the most serious evil for which the school was held blamable, namely, overwork.

We were therefore forced to conclude that *relief can come to the schools only by a radical change in the process of teaching the child during the formative period of life.*

* * * The energies that belong to building up this range of potentialities should be of the finest quality, should have the greatest liberty of action, should be awarded the highest place in the community. The training which the child is to get should be what is essentially designed for him in his unripe condition, for it can not be similar to that of an adult. So long as one recognizes that the child is absolutely different from the adult, not only in size, but also in every element that goes to make up the final state of maturity, one is more apt to get a true method of development, which must gradually bear the results of a higher evolution.

There is no doubt that many of the ideas and methods governing the treatment of children, what one is bound to provide for them, as well as what one may expect from them, are sadly deficient. The blame for this is to be laid not so much upon carelessness and indifference in parents and guardians (although these peculiarities exist), as upon a wrong conception of the problem. There is not enough of conviction in the minds of parents and guardians that the responsibility of their children's acts, either good or bad, rests upon their older shoulders, that the final outcome of these children's lives depends almost entirely upon the influences, the nutrition, the environment which the authority of the parents and guardians provide. The elements that are to be affected, being in an almost fluid state so far as susceptibility to change is concerned, require an unceasing care and attention. To break in upon

the rule for a single week or day or hour defaces the beauty of the finished product and leaves an opening for divergencies from the best growth, that can later on be remedied, if at all, with difficulty. The bringing up of a child thus means a series of lessons in self-restraint, in watchfulness, in adherence to an ideal, for the parent even more than for the child. The child will fashion himself after the patterns that he sees; he does not grow according to some hard and fast rule that has been implanted in him before he is born.

When this is appreciated, one will immediately see that the world has a wrong idea of its children. It looks upon them as adults, but slightly different, in the details of small size, deficient strength, little experience, from grown men and women. It believes that, were these details filled out and completed, the child would be the same as after the lapse of years he comes to be. And therefore, in consequence of this opinion, it provides surroundings for him that would be most fitted for a person of matured powers, who lacked strength and knowledge. The rules of conduct which result must, in the face of the child's real condition, be fundamentally false. Since he is in no way really like an adult, since his condition is one of continuous change, it follows that he needs a special treatment and environment, which must be modelled upon a correct conception of what he really is. This would necessitate a remoulding of his relations and surroundings, an overhauling of ideas about comparative influences. So long as this is not done, we are apt to bear the penalty of thoughtlessness in unnecessarily deficient men and women, in the abuses which come from one-sided and twisted bodies and minds, in a stoppage of the evolution which goes hand in hand with the best evolution of the race. * * *

We must recast our conceptions of the function and the scope of our children; we must look with unprejudiced eyes upon the part which they reasonably may be expected to play in the work of the world.—*Oppenheim.*

We have sought to answer the following:

1. Are not the criticisms that intelligent persons urge against the mechanical processes of the school just?
2. Are not the criticisms that the physicians make, that the confinement incident to studying lessons is injurious to the young child, just and sensible?
3. Ought not the child to learn in school something of the operations, principles, and purposes of the government under which he lives? (Civics.)
4. Ought not the child to learn something of the causes that make the geography of his country and the world what it is? (Physical geography, physiography.)
5. Ought not the child to know something of the causes that have changed the business and social conditions of society? (Physics.)
6. Ought not school life to make the child more generally intelligent than it has done in the past respecting other things that affect his everyday life? (General intelligence.)

7. Ought not the child to learn to use his eye and hand more skillfully than formal education in the past has caused him to do, and thus become not only a more efficient member of society, but better fitted to help himself? (Manual training.)

8. May manual training serve any other purpose than that of acquiring skill in the use of eye and hand? May it not be made to supply that which the child of the old-time school got at home by the activities of the home life of those days?

9. May learning to use the eye and hand, and thus becoming skilled in their use (manual training), during formative life, be made to inspire respect for manual labor and a liking for it?

10. May the studies of the school be rearranged with advantage to the learner, and at the same time subserve economy of time and effort to the school?

11. May learning the forms of knowledge, especially that of reading, be made to insure ethical ends?

(1) The child has had experiences that have led him to consider the postman, the policeman, the fireman, and the school. These experiences are the beginnings of civics.

(2) The child has seen the rain fall on the street and wash the dirt away, or perchance has seen it make gullies in the earth by the roadside. He has seen the leaves fall from the trees, and after lying for a day or two he has seen that they have stained the sidewalk on which he treads, leaving the imprints of their forms, which he has beheld with delight and interest. He has therefore had experiences in physiography and soil making. These are the beginnings of physical geography and of the study of continent making.

(3) The child has felt the moisture on the ice pitcher, and has seen the steam rise from the teakettle or the engine, and has seen the rain fall to the ground. He has therefore experienced the beginnings of the study of physics.

(4) The child has taken part in celebrations, in testimonials of respect, in ceremonials of honor and mourning. He has had, therefore, the foundations in experience for general information, which he may easily be made to understand.

(5) The child born into intelligent society has experience, then, in civics, in physics, in physiography, in manual training, and in nearly every other subject that has been added to the curriculum. He has, however, not known these experiences as such. It has been believed that the work of the primary school especially should be to extend these

experiences and to lead the child by easy steps to an understanding of their significance, and gradually to differentiate them and organize them into the formal beginnings of the respective studies for which the judgment of civilization seems to demand place in the school curriculum. The expanding and refining of experiences as the child grows older are no more exacting on his health and strength than that which he does before coming to school. The differentiation of these is the work of the teacher, and the organization of the respective groups is also the work of the teacher. Learning these as such, and learning the forms that represent them, are in large part what should constitute the difference between home and primary school life.

We have believed that the civilization of every age, with all its complications and instrumentalities, is the inheritance of those born into that age, and that these conditions and instrumentalities reacting on the mind of the person born into that age either directly or indirectly make his mind in exact proportion to the understanding that he is caused to get of them and to the use that he is led to make of them.

The work of extending and refining his experience in all the directions intimated in these remarks, under the guidance of a judicious teacher, will subserve the child's physical interests and give him—

Health that mocks the doctor's rules.

He will get knowing and understanding with interest and delight, as did the Bare-Foot Boy his knowledge—

Of the wild bee's morning chase,
Of the wild flower's time and place,
Flight of fowl and habitude
Of the tenants of the wood;
How the tortoise bears his shell;
How the wood-chuck digs his cell,
And the ground-mole sinks his well.
How the robin feeds her young:
How the oriole's nest is hung;
Where the whitest lilies blow;
Where the freshest berries grow;
Where the ground-nut trails its vine;
Where the wood-grape's clusters shine;
Of the black wasp's cunning way,—
Mason of his walls of clay,—
And the architectural plans
Of gray hornet artisans!

In my annual report of 1896-97 I discussed at length the problem of how the child learns. I tried in that paper to show that it is by correlation of all the instrumentalities possessed by the human being, by

which civilization has become and society has been made. Experience since that report was written and wide study have confirmed the opinions expressed at that time.

I quote freely in this discussion from two well-known authors whose works have come to my table since this report was practically completed, namely, Prof. D. Kerfoot Shute, of Columbian University, and Prof. J. M. Baldwin, of Princeton University, as also from the works of several others, all of which have appeared within two years.

The organs of sense and the hand and the brain together discover, invent, and represent. Man has been a discoverer and inventor and thereby a getter of knowledge; then he has become a giver and doer. He has learned by his own effort; then he has contributed his getting to society. If this is right, it is suggestive to us in deciding about the training of children. What should the school do for the child and what should it cause the child to do? What is the school for? Is it a place in which the child is to be taught certain knowledges and theories? Is it not rather a place where he is to discover knowledge and learn to know it as such, and be taught the forms that represent it, oral and manual?

Here we must differentiate. All the forms that the child learns must be taught to him, but neither the teacher nor the school will be connected with more than a small part of the knowledge he will possess at any given time in school life, as shown by Donaldson, quoted above.

The child is to be trained to get knowledge for himself. The school is to give him opportunity to get knowledge from original sources by making his efforts intelligently purposive for effects determined by the school. Then he is to be given by didactic processes the forms that represent this knowledge. These he learns, fortunately, by virtue of his innate disposition to imitate.

That this form-learning may have the highest educational value, the imitation should be induced when the form is needed to represent that in which the child has interest, his discovery. The child can not give and do without learning the forms that serve to convey the knowledge that he gets. These are speaking, writing, spelling (word making), and other forms produced by manual dexterity. Thus are united with knowledge getting, as a part thereof, speaking (grammar), writing, spelling, arithmetic, and manual training, all of which are motor and educative, disciplinary. The more perfectly the senses are trained and the richer the child's experience is in the development of each, and the

more effectively these experiences involve those instrumentalities that influence his daily life, the more readily and rationally will his invention turn to a profitable use of these instrumentalities for himself and for society, and the more will he voluntarily exercise and thus train himself to valuable and technical exactness in the use of the motor instrumentalities, hand and eye, muscle and brain.

How can these thoughts be made practicable?

If the child is to be trained in seeing by extending his experience, we must find something to take into the school which he may look at, or we must take him to a place where he will find something that will interest him. As I have before intimated, among the things he may be led to see are natural phenomena, surrounding him on every hand, and the instrumentalities of social life, economic, governmental and institutional, about which he knows much in an unrelated way. The bird, the field, the garden; the mother and the home; the charcoal man, the weaver, the tailor, the cooper, and other tradesmen; butter making, seed planting, grass cutting, and other industries with simple machinery constituted the social, business, and economic life of the little village where Froebel lived at a time when life was much simpler than it is to-day.

It would therefore seem no less important that the subconscious self and all that tends to its development should be held in due control and not suffered to assume abnormal influence. All appeals to the imagination of the young, all violent emotions and abrupt changes of surroundings, should be kept within narrow limits. And, although it is quite as dangerous to the development of the plastic juvenile mind to teach concentration of attention or to appeal to the memory (which is of such slow growth, as it depends upon association) too early, it is well to enlarge gradually the field of exact observation. In Nature, the contemplation of which is most refreshing to the subconscious self, we can find also the simplest materials for the growth of the intellectual, the conscious part of the youthful mind. To distinguish between essential and accidental peculiarities in natural objects should be the first and principal object lesson for the young; for in Nature all associations are most clearly related to normal functions, and the law of causation is best recognized in its greatest purity and in its fullest independence from the human will itself.

With the exception of pure art alone, all works of man bear the stamp in greater or less degree of their purpose and utility; wherever the eye turns in the city it is met by objects showing the ulterior direct and interested aims for which they were designed; and the youthful mind is filled therefore with ideas which carry it away from the appearance of things to what lies behind and beyond them. The surroundings in the country, however, impress the child with their perfection in themselves; every work of Nature has its end within itself, and its contemplation carries with it that restful spirit and singleness of purpose which is as the soul of each

crystal, plant, and insect. In the city the mind cannot be at rest, for the attraction of its life, full of plan and purpose, render concentration most difficult,¹ while in the country the power for concentration is given by the freedom left for contemplation, which strengthens the conscious as well as the subconscious self. It is a remarkable fact that perhaps most of the greatest men in history have passed their youthful days in the country; and quite as interesting, on the other hand, is the degenerative effect of city life, to which Fothergill has drawn attention in his statistical researches in respect to London and Paris.—*Waldstein*.

That he may present what he gets to society the child must learn to talk well. The school idea in relation to this last process is that he shall learn to speak correctly. We have laid it down as a duty to train him to speak mother tongue correctly. To make him speak correctly is the teacher's province—duty. The teacher is here to provide the means of sequential seeing and correct determining, and to be the guide and leader and skilled purposive suggester in correct speech in representing. The help to be given the child is to be such that mistakes will be avoided and wrong impressions and bad habits prevented. Now that the child has found out something, he has something to talk about. This is the teacher's opportunity. If the teacher knows how to do it, as he ought to know, this is the time to teach mother tongue, to teach it correctly. Not from words spoken or written may the boy easily and naturally learn to speak correctly, but by the expression of thought that is his own, thought that has come to him by his own experiences through his own efforts. In this he must be helped.

Learning correct speech (the form in education) by which his own thought is to be expressed is as natural and well-nigh as easy for the English-speaking child and as interesting to him as is the process of looking or hearing, for correct speech in a formless language is as easily learned as that which is incorrect. In giving him this the teacher who knows how may teach him the idiom of the English language. Happily it is largely free from forms so complex in the Latin idiom, or the German idiom, or that of any other inflected language. To teach him English speech, however, by the machinery and phraseology that are made for and suited to a highly inflected language will be to teach him wrong and give him a phraseology that he can not understand and that he will later throw off (neglect). The relation element of this delightfully simple and flexible language of ours is largely in placement, very little in form, which the veriest child may

¹ To develop the child's power of concentration is one of the chief reasons why the school authorities wish the teacher to go with the pupil to the Art Gallery, the National Museum, the Zoological Park, the woods, and the river side.

learn from the voice of a properly trained teacher if he only has the thought to be placed, obtained by the right means, so that he understands the relations of its parts. But the teacher who does not know the nature of the English language can not lead even the youngest child to speak correctly and at the same time to speak naturally. Correct and fluent speech is easily taught to the child who has something he wants to say.

* * * Grammar, in fact, is one of the very best of primary-school subjects, because instruction in it issues at once in the very motor functions which embody the relationships which the teacher seeks to impress. The teacher has in his ear, so to speak, the evidence as to whether his instruction is understood or not. This gives him a valuable opportunity to keep his instruction well ahead of its motor expression—thus leading the pupil to think rather than to act without thinking—and at the same time to point out the errors of performance which follow from haste in passing from thought to action.—*Baldwin*.

But we have agreed that the child must learn to read. Every teaching of psychology on the subject demands that he should learn to read first that which he knows. He will then see and learn by sight the words that he has been made to use in representing his own knowledge. He will have interest in these.

It is necessary that the child should learn to write. Let the teacher write the language that the child has given on the board in his presence and let the child copy it; or, better, let the child write it from memory after the copy has been removed from the board. The child's interest in representing his own words insures effort that will result in success if he is given opportunity to try often enough, having the correct example to imitate.

The example he is to imitate he should carry in mind rather than look at it when he attempts to make it. Then will he develop a handwriting of his own. He will learn more rapidly if he sees the teacher's movements in putting the forms on the board. By carrying the form in mind and imitating the acts of the teacher when he tries to reproduce it the writing becomes his own and not a copy. This is most valuable educational work on the side of manual training. He learns to sense forms and reproduce them by self-effort, but not by copying. The difference between copying and imitating is of broad significance in educational directing.

This question appears very clearly when we ask about the child's acquisition of new acts of skill. We find him constantly learning, modifying his habits, refining his ways of doing things, becoming possessed of quite new and complex functions,

such as speech, handwriting, etc. All these are intelligent activities; they are learned very gradually and with much effort and pains. It is one of the most important and interesting questions of all psychology to ask how he manages to bring the nervous and muscular systems under greater and greater control by his mind. How can he modify and gradually improve his "reactions"—as we call his responses to the things and situations about him—so as to act more and more intelligently?

The answer seems to be that he proceeds by what has been called Experimenting. He does not simply do things because he has intelligence,—simply that is, because he sees how to do them without first learning how; that is the older and probably quite erroneous view of intelligence. The mind can not move the body simply by its fiat. No man can do that. Man, like the little animals, has to try things and keep on trying things, in order to find out the way they work and what their possibilities are. And each animal, man, beast, or bird has to do it for himself. Apart from the instinctive actions which the child does without knowing their value at all, and apart from the equally instinctive imitative way of doing them without aiming at learning more by the imitations, he proceeds in all cases to make experiments. Generally his experiments work through acts of imitation.—*Baldwin*.

It is desirable and necessary that the child should learn to spell. The words representing what he knows are the words that he should spell. If he can spell all the words that stand for all that he can find out and all that he can learn to read, he will be a good speller and will know how to spell the words that he will employ in writing his own experiences and ideas. When learning to write for the forms of words the child learns spelling by the same principle as he learns writing. The forms of the words are carried in mind for reproduction. He acquires the habit of observing closely and fixing details in the mind. This he will not do so well if he writes from copy.

The forms—reading, writing, and spelling—may be emphasized for the securing of ready reading, legible writing, and accuracy in spelling by drill that will not be burdensome to the child, because of his interest in the product he is presenting, it being his own.

The curriculum of the early school is one of choice and opinion and convenience of circumstances. The child is to obtain experiences that will be to him interpreters of those of others which he is to find in books to which the school is leading him. He is to be led to an appreciation of the experiences of others by experiences of his own, but he is to become acquainted with the experiences of others in large degree by knowing how to read. The number of objects and conditions by which he may get these experiences is legion. The number to be selected for school use is comparatively small. Their selection, however, is to be intrusted only to him who is expert by virtue of experience in this work.

The determination of that which the child shall be led to investigate, what he shall be led to see and understand, fixes that which under instruction he is to talk about and thereby get correct idiom, and then what he is to write about, and then what he is to read about, in his early work. On the intelligence and faithfulness with which the child is led to do these things depends the proficiency he will make in speaking, reading, writing, and spelling.

The learning of these forms is not to be made incidental, but is to be made subordinate to content getting and mind building. To make the study and acquirement of these forms the purpose of the school is to defeat the chief value of the school, namely, getting content and coordinating the parts of the mind by a united effort of the bodily instruments of content getting. To the deadening process of learning to speak for its own sake, learning to read for that alone, learning to write for the sake of learning penmanship, reciting grammar or repeating text, together with consequent forced methods of getting the work done, prizes, marks, punishments, is chargeable the nervous strain resulting in breakdowns, and is wholly chargeable the child's dislike of school, and is the primary cause of truancy. The work of learning forms for the purpose of representing what the learner has learned and done is but slightly less interesting to him than the discovering or doing of that which is to be represented by the forms. This psychological truth is the basic principle of that kind of school life that will subserve the health of the child while engaged in learning. This basic principle of school life is to truancy and dislike for school what quarantine and correct living are to contagion—prevention.

If the determination of the curriculum involves as a beginning the study of the plant or the bird taken to the schoolroom or studied in the park, we have, in addition to something by which the child is learning to see, to talk, to read, to write, to spell, to punctuate, and to capitalize, the beginning of geography. If the subject for investigation is the thermometer and the effect of heat on it, or the magnet to discover the curious things that it will do, in addition to the forms (essentials?) of education above enumerated, the child is getting a beginning in physics.

If the subject is the length of the front step or of the sidewalk on one side of the school yard or of the table in front of the child, or the block in his hand he has a beginning in arithmetic. If the subject for investigation is a directed and stamped envelope, with the study of the stamp or the direction or of both, the child gets a lesson in institu-

tional life which is, psychologically, the beginning of historical study, and which, broadened by a further knowledge of the life of the city as he goes from grade to grade for two, three, or four years, will give him interpreting nuclei for the study of history. This will enable him to read and understand properly written history without the killing grind of committing words to memory whose full meanings he does not comprehend. Our knowledge and appreciation of the affairs and instrumentalities of society that affect us are the measure of the power and intelligence we have for understanding the lives and conditions of those who preceded us in society, as set forth in books, pictures, and other representations.

The child's judgment of the affairs of social life affecting him and his motive for action aroused by them are determined, indeed, by the understanding he is made to get of them when he is led to contemplate, examine, and study them. In this fact is seen the teacher's high function.

Other illustrations of our work need not be given for my present purpose. It is here seen how the beginnings of civics, physics, history, arithmetic, geography, and a study of nature are made, yet the child is learning the common branches—to read, to write, to cipher, and spell. He is learning these things by a process as interesting to him as playing with dolls, stick horses, or spool wagons, or more elaborate and expensive toys, and that by means of the instrumentalities of the civilization—parks, zoological garden, ice houses, power houses, postmen, flower gardens, parlors, drawing rooms—that have helped to make him what he is before he comes to school.

Man grows by certain laws; his progress is conditioned by the environment, both physical and social, in which he lives; his mind is a part of the natural system of things.—*Baldwin*.

It is desirable that the child should learn to represent by means of the brush or pencil. The value of the hand in expression and for the making of civilization has already been pointed out. The child has as great a desire to express himself by means of the hand as he has by means of the voice. The gestures of babyhood significantly testify to this truth. Let the child, under direction, paint or draw the things that have been chosen for study and investigation. This will help him to understand their forms, colors, uses, and their applications in the affairs of life, and, what is more important and is the chief reason for the drawing exercise, it will help to coordinate the centers of sight, touch, sound, and other senses in the cortex, and thus establish a com-

munity of mental possibilities by the use of the motor factor. Drawing, furthermore, not only trains the boy to see better, but it unites feeling with seeing, giving an increased power to the mind. The same may be said of painting, with the addition that new sensuous activities are aroused by virtue of color. Thus do sensations of form, color, place, size, direction, through action and feeling, grow into a unity of mental strength. And this is accomplished by activities that interest the child and subserve his bodily welfare. He will get nearer the things that he is talking about, his eye will see more, his ear will hear more, and his fingers will feel more. Each of these additional sensations and each peculiarity of them that he is made to get will affect him and broaden his life and give richness to his experiences as the field and river gave richness to the sparrow's song in the ears of Emerson. Words dictated or copied that the child does not understand through this kind of experience, this union of which I speak, can never mean to him what words do learned as I have suggested; and when books are read or speakers are heard in the future involving the use of these words and words of kindred meaning the paragraphs that he reads or thoughts that he hears uttered will enrich his mind proportionally to the amount of correlation of effort of the senses which he has used in getting his first knowledge—interpreting power.

But this is painting, this is drawing, this is manual training.

The child will want to represent what he has learned by other means than the brush and the pencil. He will be glad to represent it in clay for the sake of showing its forms and for the sake of inventing new forms based on those learned, that he may give himself pleasure in the exercise of his imagination. Imagination, developed and directed to definite uses, is invention. This is manual training, the best and the richest that could be provided, beside which sloyd, a superimposed instrumentality, is of little value.

The child must learn arithmetic; but man did not learn arithmetic originally from dictation. He learned it by measuring, counting, testing, comparing, marking, deciding, and re-marking when making. The child may do this and learn arithmetic from two to ten times as fast and much more rationally than he can possibly learn it from dictation or from a book; but in measuring sidewalks, the tops of desks, the areas of floors, the capacities of boxes, etc., the child is exercising his hands and his feet and his senses in correlation with his brain. This is manual training than which no better can be had, though it come from Norway or Sweden or from the islands of the sea. The child will

desire to represent, or may be easily induced to represent, triangles, squares, and other geometric forms in paper by folding it, and then he may desire to get the areas and the perimeters of these forms. These he can get only by measurement. The forms can be made only by careful measurement, by folding and cutting, and the areas and perimeters can be ascertained only by measurement and counting. This is arithmetic of the best possible kind and is manual training than which there can be no better.

The child will desire or may be easily led to make boxes of varied shapes of cardboard—prisms, cones, frustrums of cones, etc. Then, to satisfy his curiosity, he may be easily led to determine perimeters, surfaces, contents, and to make comparisons of these; but in doing this he gets manual training, he gets arithmetic, and he gets geometry or the beginnings of geometry, which will give meaning to this study later on, or which will give him knowledge of many useful facts, practical in everyday life, should he never reach the school where geometry is studied as a separate branch. To do this work he measures, involving the use of eye, hand, and brain in correlation; he marks, cuts, fits, joins, and pastes or unites by some other process—all of which is manual training. If he talks about these things and afterwards writes about them, as he should be made to do, he will have the best possible training in English, which training will include spelling, punctuating, capitalizing, and attending to form and neatness.

Now, if the teacher will emphasize the forms of knowledge—the spelling, the writing, the reading—so easily done without harm to the child's nerves at this time (I think without possible harm to the child's nerves when done in this way), he will learn all these with a rapidity that will gratify his friends.

Only the teacher of experience or one who has been trained can do this work. The teacher must have broad knowledge, that no mistakes be made. The teacher who does not know, for instance, that a flower has petals, that a fish breathes by means of gills, that the tadpole becomes a frog, that a butterfly comes from another form of life, and other common facts known by intelligent persons, can not do this work well; one who does not know that an understanding of the instrumentalities of our society, such as the delivery wagon, car lines, art galleries, and the means of supplying our houses with water, and that an appreciation of the simpler institutions of common life are the foundations for the interpretation of civics and historical study, a study of men and institutions in other times, will not do good work; one who does not

know how to organize words into correct speech or does not exercise care concerning the spelling of all words, or does not know how to write them perfectly on the board for the child when his plastic mind receives these forms, to represent that in which he has great interest, can not teach the child by processes that will secure to him health and happiness while he learns. The teacher who does know how to do this will find it impossible, I believe, during the five or the three and a half hours that the child goes to school, to overload the curriculum. The competency, efficiency, and faithfulness of our teachers can not be too highly praised. The high school exists in part for giving the technical information necessary to do this kind of work. Our normal school exists for the purpose of training the teacher to do this kind of work. The work of the school is of the highest character.

The question of pedagogy is settled by the question of psychology—how the child learns—and by knowing how to extend and organize the child's experiences and how to lead him to interpret and represent the same.

The child has been learning to see, to hear, and to do aright. The nerves have been trained, cultivated, and nourished. The variety of time, place, instrumentality, and activity of this work under proper guidance insures against mental strain and physical harm.

It is easy to see that an organism which is in a condition of unstable equilibrium may, by seemingly slight causes, be injuriously affected. Where the organic elements are so delicate, where their relations are so changing, where so long a time is necessary to insure their normal and healthful completion of growth, it must be clearly evident that the artificial conditions which constitute their environment must play an important part in deciding the value of their ultimate activity. Such things, taken together, go to form a child's nutrition, for this term can not rightly be used to designate only his food.

On the contrary, every fact which affects metabolism, tissue-change, must be included in this term, nutrition. The conservation of energy in motor impulses, sense impressions, physical exercises, comes within the boundaries of this category. The child whose sense of sight is wrongly or too early taxed, whose power of food-assimilation is abused, whose order of mental development is ignored, is suffering from poor nutrition. This child who prematurely participates in experiences and ways of living, who is allowed to wander outside of the limits that a conservative idea of growth imposes, who becomes subject to conditions that only the strength of maturity can withstand, is thus subjected to adverse conditions that must surely leave their mark upon his later organic form. Such a child is suffering from a vicious nutrition. The child who assumes responsibilities beyond his years, who undergoes the wear and tear attending the course of a too rapid development, who lacks the benefits of a wise restraint and discipline, is bound to show the effects in a partial and one-sided development that bars him out from the full beauty of finished maturity. Such a child suffers from the effects of a misdirected and vicious nutrition.—*Oppenheim.*

The child has been learning correct speech in a way that is not harmful, because it avoids nervous strain by the most enjoyable means possible, and he has been learning to read in a strictly health-giving way. He has been learning to write and to spell. He has been learning arithmetic, and he has also had clay modeling, paper folding, and object making, and other forms of manual training, in which he has taken delight.

But the physicians have told us that our children must not sit so long on the school benches, that they must not spend so many hours in deep study in the schoolroom, that the children must have more pure air, that they must have more physical exercise, all of which we have heard and seen, believed and tried to understand, and for this reason we have had our child getting his knowledge by his own activity partly in the schoolroom and partly out of it by an examination of things and processes and by doing by use of the laboratory method. He has been sitting but a portion of the time and that in distributed intervals. His work has been varied from time to time for the very purpose of subserving his health. He has been sent to the yard to determine its area; he has gone to the park to study nature or to secure specimens about which to talk, where he got exercise in the open air; he has gone to the blackboard to write a part of what he has learned; he has stood at the table to examine objects or to see others examine them. He has been exercising his feet, his hands, his organs of sense, and his brain in correlation for the purpose of getting knowledge, and while he has thus been getting knowledge he has subserved his physical interests in an inferior way only to that of play if at all, for work is but play for a purpose to him who is interested in it. But what else has the child got? He has been studying the instrumentalities of society, of which he is a part. The child has gone to the power house and seen the machinery by which the cars are driven on which he rides to school or on which he rides with his mother shopping. Froebel did not teach this thing to his child for a very good reason. For a very good reason we ought not to try to teach our boy except later in the course as a matter belonging to the study of history some of the things that Froebel taught.

It is desirable that the child's moral nature should be trained, that he should have ethical training. Some one has said that the bulwark of honesty in education is exact knowledge, but I say that the bulwark of honesty in education is exact knowledge (truth) secured by self-activity, self-induced. (The difference is world wide.) The child

habituated to be honest with himself will grow to be honest with others. Our boy has been investigating for truth. If his school-room has been what it ought to be he has found nothing but truth; he has been in an atmosphere of truth; he has been seeing, talking, writing, reading, nothing but truth, that which he knows to be truth; he has been painting, drawing, modeling in clay, representing truth by aid of his eye and his brain. Truth as opposed to error has been verily kneaded into his character in this most plastic period of his life. When he has exercised his imagination in the process of invention with clay or other material he has had truth as a basis therefor, which truth has involved form, color, place, number, uses, mobility, and the effects of those combined and their values for structural purposes and in structures. He is given no fable, no fairy tale until he is old enough and has had experience enough to realize and understand it as such. He has been given only truth, only that which he knows to be truth by his own investigation. If his teacher has been what he ought to be the child has not been deceived, he has not been allowed to deceive others. If his teacher has been what he ought to be the child has not been allowed to report to his home or to his principal, or to the general supervisor of his work, or to any one else work which was not, in the minutest detail, his own. He has been in an atmosphere of truth, simplicity, and confidence. This is not religious training nor is it to take the place of religious training, but it is a foundation for religious training, than which there can be nothing superior except the mind of the creator of mind.

The child's happiness must be subserved or else his health will not be subserved. His health failing he will not succeed to the best advantage with his studies. But the child has been exercising his hands, his feet, his body, his senses, in correlation with his brain a large portion of the time in the open air. His feet, that connect with his brain by double-tracked nerves linking them with the very centers that register the thought which he is pursuing, have taken him where he has gone to find the truth. His hands and the muscles of his arms are from every portion of them connected with his brain, fixing memories of thought which the activities of this instruction disclose to his inquiring mind. The entire self is in coordinate action for the making of mind by the very processes that made the mind of civilization, and his health and growth are subserved by the very processes that have developed man as he is, mind and body.

This is not the old school. It is, in fact, the new school.

I realize only too well that to fit the child to proceed in life along the lines of knowledge that in future he will care to pursue, he must be trained in the forms of knowledge, reading, writing, and spelling and other forms of expression; the forms must be taught. The process of the school is wholly, so far as it is carried out according to the theory herein set forth, from content to form. That is what the new education means. The process of the old school out of which the modern school is evolving is from form to content. The school that teaches by these processes, from form to content, is the school that breaks the child down in health.

The school that teaches, truly and rationally by the other processes, from content to form is not likely to overwork the child during the hours allotted to his school life.

In the process of evolution it is an easy matter to neglect the forms, as it is an easy matter by the old method of teaching to neglect content. But there is remedy for the former evil, while for the evil existing in the old method there is no remedy. Its teaching makes the child's mind wooden, and deadens the intellect. The effects of this deadening can never be remedied. The remedy of the former evil is in isolating the work of studying the forms with some children who do not get them readily. I have not assumed to underestimate heredity in any of my remarks, nor to ignore the fact that there are certain factors in heredity that can not be overcome. Some children do not learn forms as readily as do others. Teachers should have judgment to isolate such children in groups or individually, and give them the drill that is necessary to make that part of the work good.

I have set forth in the foregoing the process of teaching in our primary schools above the kindergarten. Having written only for the purpose of giving a somewhat comprehensive illustration; I have not attempted to set forth the entire work of the primary grades. It would require more space than is allowed me. A few remarks on special subjects seem pertinent at this time.

It may be here remarked that the teaching of physiology and the laws of health was made mandatory by an act of Congress. Fortunately the wording of the act left us free to teach these subjects as we teach other subjects in the course of instruction. These, therefore, have been taught by the objective method. After being taught by means of objects each subject has been followed by reading lessons relating to the same. This is the manner of teaching all subjects found in the course of study below the high school.

A RESTATEMENT OF GENERAL PRINCIPLES.

The primary purpose of the school for the young child is to cause him, by busying himself in interesting yet rational exercises (employments) under favorable conditions—

(1) To subserve and insure his health and promote his bodily welfare;
(2) To lead him to appreciate the value of and give him skill in the use of those instrumentalities by which knowledge is primarily obtained and used;

(3) To cause him to get such knowledge as will serve him as interpreters in his future study;

(4) To lead him to know and to understand as such the symbols (language) that represent the knowledge he gets.

At what time in the life of the child this kind of work should begin is not known. Opinion differs very widely respecting that subject. If that which he will be led to do is adapted to the conditions of the child's development with intelligent care purposive employment may begin when he is quite young, perhaps not more than 4 years old. It is no doubt true that school exercises should gradually change (shade off) into that kind of school work by which the learner pursues definite studies segregated as special branches, and understood by the learner as such, and into exercises also in which he employs his activities in definite lines of training for manual dexterity. How rapidly these changes, this shading off, in the school should take place as an average expectation (prescribed by authority) it is beyond the knowledge of man to-day to determine. It is one of the problems that is being investigated whose answer will further determine the effects of the revolution now taking place in school matters. It is, however, a significant truth that must not be overlooked that for each child the course of instruction should shade off into the second kind of school in strict accordance with his growth and development. This will necessitate a variety of work for each class.

It is a well-known principle in psychology that, other things being equal, one who acts most on what he already knows learns most rapidly. The immediate problem in education in each stage of progress is to prescribe or suggest the right course of action, the thing to do, the one that will be profitable. If circumstances are such that the teacher may prescribe for each child that which will be most profitable for him to do the school will be most nearly right. The direction of the work of the school, therefore, must be determined with the utmost care. It can be

determined only by a thorough knowledge of the child. This is the supreme place and time for "child-study." Hard and fast rules will not serve as guides. Generalizations will operate to little purpose. In the getting of this knowledge the parent could give substantial aid to the teacher by understanding the instrumentalities of education and their respective purposes.

MANUAL TRAINING AGAIN.

The most important function of the school, after that of giving ethical training, is that of giving the child manual training (making him handy, accurate, and efficient) in the directed exercise of those activities by means of which he gets and uses knowledge.

Manual training as a result in education is of special interest and the process of securing it is of supreme importance in the education of the child. It demands our attention especially because of the large number of colored children that are found in our schools. A superimposed system of manual training for adults or for youth well advanced in the formative period of life, good as it is for those who are trained and most highly to be praised as it is, is faulty, very faulty, psychologically as a process that characterizes a system of education for a race. The superimposed trade school without a preparation in the control of the eye and hand may not inaptly be likened in value as a part of an educational scheme to therapeutics as a part of a scheme for securing the health of a community. Therapeutics is valuable, but it is not comparable to prevention. It is curative, not preventive. The teaching of a few hundreds, or even thousands, of mature people by a superimposed method of instruction to make a few things, even many things, will develop a race so slowly as to be disappointing, because of its little relative value, though the immediate and recognizable value may seem to be very great. Nor is it economical to superimpose the trade school on a system whose pupils have had no hand training during the formative period. If knowledge can be secured as rapidly by the manual training process, and my contention is that it can be secured much more rapidly, besides being secured rationally and naturally (this has been illustrated in the Washington schools), then there is much loss of time in teaching in the primary school by the form method and afterwards for practical purposes superimposing the trade school. The latter is useful for the few, not formative for the many.

Unless the child is trained in manual dexterity in his process of

getting knowledge it follows that the trade school must begin its work with pupils who have had no preparation for it. Not only will it require more time to learn a trade, but the trade can not be as well learned. The child at any given age, 14, 16, 18 years, who has gained knowledge and skill by those processes that discovered and made the instrumentalities by which this continent has been developed and this civilization made, namely, by manual training, will learn his trade in one-half or one-fourth, or a smaller fraction of time than the child who has not secured his knowledge by the manual training process. The truth of what I say is now seen in the schools of Washington every year. The significance of this truth to the colored race is so great to my mind that it were a grievous wrong to the colored youth to put a spelling book or a grammar into his hand instead of an object to be studied and talked and written about and afterwards represented by manual effort. The colored person, beginning with the young child, should get manual training, not as a superimposed instrumentality of cultivation, but as a means by which and through which he will at the same time get knowledge and be trained in hand and eye and brain in correlation, while he is learning to talk, to read, to write, to spell, and to cipher. That form of civilization in which the free colored man found himself less than forty years ago segregated labor from thought. Civilization can be developed aright in justice to every person affected only by uniting brain and mind and the instrumentalities of mind in its development. A dislike for labor is inherited by many generations of labor performed without thought. A process of learning that does not coordinate brain centers in giving direction to it develops a dislike for labor which controls for its exercise only for the gratification of self and the grosser desires of animal life. Brain must direct labor with intelligent interest if we would not produce the man represented by Millet in his painting "Labor" ("The Man with the Hoe"). If men shall learn to think with their labor and to direct their labor by thought and by their labor increase thought and give value to it, then must the child who may become a laborer be made to get thought by means of self-activity correlating the centers of thought by the exercising of those bodily instrumentalities that do things to subserve a more refined and a better self.

Manual training secured by knowledge getting revolutionizes human thought and feeling on the question of labor. Manual labor is then but another expression for manual training, but manual training that

comes by the securing of knowledge means labor with thought behind it, directing it, giving interest to it, ennobling him who labors. "The man with the hoe" is not such because he must work for an employer who furnishes the capital, but he is what he is because education (the school) did not do for him what it could have done, and therefore should have done. The employer in nine cases out of ten secured his power to get wealth by the process of correlation of which I write. A study of the world's men of action proves this statement. If the man labors solely for his daily bread he will develop the "brutal jaw," if he works without thought and responsibility to interest him in his work he will produce the "brow aslant," if he works solely for wages without interest in the product of his work other than the benefit to himself he will become "to rapture dead, a brother to the ox." Man must learn to do intelligent work not because he is always to be a menial, but rather because if he does not learn to work intelligently and by discharging responsibility he always will be a menial. It is so decreed of man by the organization of his mind and body. The child at home must learn to be handy, tidy, and industrious. To learn these things he must become interested in them. To become interested in them he must be made intelligent concerning them. This can be accomplished only by experience in these or corresponding activities by exercise of the senses and the growing brain in correlation with manual effort. The arithmetic, grammar, spelling book, writing book, will not do it; they can not. They have helped the Saxon race but little in doing it; psychology has proven it, the growth of mind declares it, the success of man in government and in industrial life proclaims it. It shall be the province of manual training for both sexes in the primary school taught by the process of satisfying the human mind in securing knowledge to ennoble labor by securing manual skill. A superimposed system of manual training that begins with the adult or deals mostly with the mature mind will not accomplish these results in the development of a race except by very slow stages. As this civilization shall in the future make of its working men also thinking men and by its processes of education shall make its working men cultivated men, because they think with their work, it may hope to endure, to advance, and to subserve peace in society and contentment in the human breast. But a superimposed process of learning manual dexterity will not secure these ends. A superimposed process of learning to work will be accepted as a drudg-

ery, or at best as a means of better subserving self, whereas labor that is learned and becomes ingrained as a means of securing and applying the knowledge of the world to benefit the world as well as self will be made as ennobling, inviting, and lovable as knowledge and wisdom themselves.

READING.

The second most important function of the school is that of teaching the child to read.

Early in the course the child may profitably begin to learn to read. By what process he learns to read is of the utmost importance to him as it will have a controlling effect on his future reading. At no time should it be made to him a task to be undertaken for its own sake. Always should it result from effort on his part to secure that which he wants. It is probable that the dislike which the child forms for a person, condition, or circumstance in his experience, even when very young, influences him throughout his entire life. The influence is appreciated whenever in later life anything transpires that suggests the person, condition, or circumstance.

The child will seek to gratify and amuse himself by doing those things the doing of which in the past have given him pleasure. Naturally he will choose employments that please him best. If reading has been made a task to him he will not be likely to read for gratification but will rather divert himself in other activities that please him better. Being social in his nature he will want society. He will seek it. If he can satisfy this want by reading what others have said he will do so. If he does not like to read he will satisfy his social nature wholly by seeking the society of other persons, though not wise enough to choose aright. In this there is an element of danger, which danger should be insured against if it is possible to do it. Assurance must be in the nature of formation. Many laws of crime are as unerring as is the law of gravitation. The child will seek to gratify his love of pleasure on lines of the least resistance. He will read that which he understands most easily. The school can not escape the responsibility that attaches to the condition in which it puts the mind and habits of the child whom it teaches to read.

Though the child may like to read he may not care to read the right thing. The determination of what he will read when exercising his own choice after leaving school is largely in the hands of the

person who gives him his early lessons in reading. This will be on the lines of knowledge secured by the activities of his mind and body when he learns words. If these are such as he can thoroughly understand, are such as gave him pleasure when learning words, the parent and teacher may be assured that these are the lines along which he will read with pleasure. The proof of the foregoing is set forth in what I have said and quoted on the effect and value of environment.

If the child is taught to read by the process of learning words, selected from his vocabulary for the sake of giving him power to tell words by a knowledge of the elements that make words (mechanically), he may indeed be taught to read as rapidly as by any other process; but if he is so taught, the teacher, the parent, the school, and society will have to trust to the child's likes and dislikes as secured elsewhere rather than to those obtained by the process of learning to read respecting that which he will read after he has learned to know words. He may in this way disappoint the teacher, the parent, and society. Reading may thus become an instrumentality by whose use he may get pleasure, it is true, but what he reads may not add to the sum of his knowledge but may poison his mind and corrupt his character. In this principle is involved the supreme responsibility, the supreme danger in teaching the child to read. "Books are the best of things well used; abused, among the worst." As surely as environment and self-activity make for character, so surely can the school determine what the child will read. This it can do by teaching him to read by the right process (from knowledge obtained by self-effort to the forms of knowledge).

We are about to have a new city library. We now have a great national library. There are numerous small libraries in our midst, each of which, by the courtesy of those who manage it, is accessible to many of our children. The responsibility of the school toward these libraries, these masses of books, is of much more than passing moment. By the instrumentalities by which children are taught to read will surely be determined, almost as surely as that night follows the day, how these libraries will be used by the children and what these children will read.

The uniting of sensations, the reactions from an object, secured by seeing, feeling, smelling, tasting, and those of pressure, balance, temperature, and others, by the thinking of them together, causing the mind to grasp them as one, and the combining therewith a name, and then comparing this whole, with all its parts and bearing with

it its name, with another object in all these particulars having also a name, is the process through which the mind goes when dealing with objects by experience. But the knowledge gained, the identity of the objects, their names and the likenesses and differences between them, is not the chief benefit of the exercise; nor is the chief benefit that by which the mind knows by the exercise of one sense (all the others being closed) the attributes secured by all. Though this is marvelous, the primary educational benefit to be derived is the exercise given to the sense centers by the thinking of these results together and then coordinating them for further power and use, and thus rendering each sense valuable to the self by compounding effects of all senses employed. The child who learns to read by processes involving many experiences—seeing, hearing, tasting, lifting, feeling, etc.—learns words that represent the delights obtained by use of all the senses employed. The self is enriched and gratified by all means employed. The words learned represent this enrichment. Whether or not the public library shall become an actual, valuable, and constantly enlarging blessing to the community will depend on the attitude of the schools of Washington respecting the values of a library in a community, and its place in the moral and intellectual advancement of the people. The attitude of the children toward books and the beginnings of growth in their minds of the values that books contain for them are dependent on the way the children are taught to read.

In my boyhood one of the lessons I was made to read and one whose meaning left a lasting impression on my mind was entitled, "Read and you will know." In later years I have come to know that this statement is not necessarily true and that my early training was therefore wrong. The child may read much and yet know very little of that which he has read, indeed without even having much conception of what it is about. Rather should the statement be reversed: Lead the child to know, then may it be expected that, if he have the opportunity, he will read, because he will have some reason for reading, some inducement to read. There is danger that children be led to read too much. It is not so important how much they shall read, but what they shall read, what they may retain of that which they read, and what they do with that which they get by reading—do for themselves and for others.

When the child has been taught to read by the enriching methods of knowledge getting precedent to word learning, progress in geography, history, indeed all branches of knowledge that must be acquired chiefly from books, becomes easy. It is by these means also that acquiring these studies is made pleasurable and therefore free from harm.

In the discharge of the responsibility believed by us to obtain when teaching the child to read we have led him in his searches for knowledge into fields of knowledge only in which he has had interest; then we have developed organization and relation of knowledge, and thus have we instructed him in the representation of organized knowledge; then we have introduced reading on the subjects in which he has been interested, has worked, has obtained knowledge, has organized it, and has presented it. The child has shown a delight in reading that has been encouraging. Reading for information has not been a task, and, what is more important, especially to each individual child and therefore to the community at large, he has been so interested without effort on our part in reading the kind of book that we have provided for him that he has ceased to read the dime novel and other pernicious literature which in former years was the bane in school and a menace to society. The dime novel has disappeared—not because it has been ordered out or kept out by police regulations—it has disappeared because something else has come in which the child likes better. In this one condition the welfare of society is the more secure.

Presented herewith are reports from the director of high schools, the supervisors of the several divisions, and the directors of special departments of work, which show the scope and plan of the work of the schools in large degree. They also to some extent show the condition of the schools. I present these for your careful consideration.

Yours, with high esteem,

W. B. POWELL,
Superintendent of Schools.

THE BOARD OF SCHOOL TRUSTEES.

REPORT OF SUPERVISING PRINCIPALS.

WASHINGTON, D. C., *November 24, 1899.*

SIR: By election of the corps of supervising principals it devolves upon me to prepare for that body the annual report of the work done in the graded schools of the District of Columbia during the year 1898-99; having been approved by them, it is now submitted for your consideration. It will be found to be arranged primarily by subjects and secondarily by grades, and given with somewhat more of detail than usual, for the reason that the course of study prepared seven years ago has been outgrown, and in the hope that it may be of some assistance in the preparation of another.

In this report the nature work is treated as under the subject of language.

The outlines of work appended are those which have been furnished for the guidance of teachers of the fourth to the eighth grades from time to time as the need appeared, by the supervisory corps, and will be found to be necessarily fragmentary, there being no intention to outline all the work but only to assist in such subjects or parts thereof as seemed for one reason or another to be desirable; the numbers of the notes indicate the grades. The work of each of the first three grades is carefully and definitely outlined by Miss E. A. Denney and her assistants, and assigned by them at their meetings with the teachers of these grades held monthly at the Franklin school.

LANGUAGE.

The teaching of this subject was preeminently the work of the schools at all times and under all circumstances, it being the main line of work to which all others contributed and to which all others were subordinate.

FIRST GRADE.

In beginning language the subject was taught in the first grade always in the objective way, as well as in the experimental and anecdotal. The teacher's actions and example are more forceful than her words; the child's own experiences are more permanent still; he not only sees the object, but he handles it and talks of it; his thought, gauged

by the accuracy of his oral expression, is developed by the skilful questioning of the teacher who frequently and repeatedly supplies the correct and more elegant idiom.

Much attention was given during the first eight weeks of his first year to conversation on nature work, intended largely to make him free, unconstrained and happy. Here he began his systematic study of insects, birds and quadrupeds, flowers and plants. His seeing was first trained; he must see correctly, see what really exists; in plants—where and how they grow, eat and drink, and their uses; in seeds—noting their coverings, receptacles, etc.; about insects—collecting for schoolroom study caterpillars, tomato and ailantus worms, bringing with each its peculiar food, and so maintaining its natural conditions of subsistence as nearly as possible that it may continue its normal routine in the process of transformation.

In this grade began the training of eye and hand by attractive and instructive seat work.

About the third month of school the conversations were supplemented by the development lessons preparatory for reading. The child received clear impressions of a number of words and idioms which were reproduced again and again at the board, then used in original sentences during the lesson period, and finally employed immediately afterward in his seat work. When quite a vocabulary had been built up, he was able to write connected and sequential compositions, many of which were reproduced on the board.

Along with the work in idioms went that in phonics. In pronouncing selected words the child separated the initial consonant from the rest of the word. As seat work he wrote lists of words beginning with, ending with, or containing a certain consonant; he selected all the words containing a given consonant in his reader, and he built new words containing a given syllable, so that by the end of the year he was familiar with the form and sound of each consonant.

As a further aid in language building much use was made of the morning talk which included a great variety of subjects, sometimes about the material, such as leaves, flowers, fruits, the apple, peach, pear, plum, cranberry, banana, olive and orange, which the children bring to the schoolroom in such profusion; or of time, the change of the seasons; insects; birds; the months with their various holidays; the weather vane and winds; heat—natural and artificial—the thermometer, clouds, rain, snow, hail, ice; light; markets; railways; gardens and farms; the parks in the city—why they are there; their own school building and something of its management; and many other topics.

When the child had been taught in script perhaps a hundred fifty words by this objective method the print was presented. The transition from script to print was direct; a word which had been taught but which was unfamiliar in its new dress was shown in the script and was immediately recognized. The child's vocabulary was enlarged also by

the work in synonyms. From five hundred to eight hundred words were taught a first-grade child. Besides the primer two first readers were read through by him and several of the easier of the second grade *Æsop's fables*.

Literature was taught in connection with the nature work; such poems as *The Stolen Leaves*; *Stop, Stop, Pretty Water*; *Thanksgiving Day*; *Hiawatha*; *Little Boy Blue*; *The First Snow-Fall*; *The Violet*; and *Working and Shirking*, being memorized after the thought of the selection had been thoroughly and repeatedly talked over.

SECOND GRADE.

In the second grade the work with the initial consonants was continued; the force of final *e*, long and short vowels, and Italian *a* were taught.

For the morning talk such topics as the harvest time, Thanksgiving, the first Thanksgiving, Christmas and other stories of the season, the pine tree—kinds, uses, etc.—were added to those already mentioned.

During reading the child was closely questioned by his teacher for the thought of the selection, and in addition, he reproduced it orally and in writing. This was not memoriter work; he was encouraged to avoid the phraseology of the text. Much supplementary reading was done, including stories and poems adapted to the use of the child.

Along with this work were appropriately taught *The Four Winds*, part of *Hiawatha*, the myths of *Mercury*, *Apollo* and *Ulysses*, *Whittier's Thanksgiving Day* and *The Pumpkin*, *Hans Andersen's* stories of *The Pine Tree* and the *Discontented Pine Tree*, *The Crow's Children* by *Carey*, and many poems by *Eugene Field* and *Robert Louis Stevenson*. Several of these poems were reproduced orally and in writing; a few were memorized. Some written composition was required every day as was true also in all other grades. Comparison was taught here. In this work the trips to the Museum, the Zoological park and the woods and parks were particularly valuable.

In this grade the child studied in October the peach compared with the apple, the grape, pear, other fall fruits, and dry fruits; the grasshopper, caterpillar and cocoons; the aster, morning glory, golden rod, petunia and cosmos: in November the fruits of the sycamore, oak and chestnut trees; the uses of the fruit to the plant; the methods of seed dissemination and also typical fleshy and fibrous roots: in December and January underground stems and bulbs, nuts and birds—their classification, habits and service: in March the form of the human body; birds as scratchers, swimmers and waders: in April wild flowers, flowering trees, seeds; birds—perchers—and the relation of bird life to insect life, insect life to plant life, etc.: and in May to the end of the school year, flowers, seeds and birds. Selections were read from *Allen's The Story of the Plants*, *Fairyland of Flowers*, *Dana's Plants and their Children* and *Dana's How to Know the Wild Flowers*.

The child was also taught the effects of heat on gases, liquids and solids. All these subjects were worked over and over again until the child through mere repetition became so familiar with them that it was not unusual to find in his written work frequent allusions to past lessons. In fact nothing was laid aside as complete but everything by repeated reference was kept fresh and ever present.

For technical grammar he learned to distinguish *to*, *too* and *two*; *a* and *an*; *when*, *then* and *than*; *see*, *saw* and *seen*; *draw*, *drew* and *drawn* and other irregular verbs, and to perform the pluralization of nouns ending in *y*, *f*, *x*, *sh* and *ch*.

THIRD GRADE.

In the third grade the science work of the Normal second reader was reviewed objectively. Vapor work; the venation of leaves; many kinds of birds; the compositæ, spring and fall flowers; flowering trees and different kinds of pine trees; the grasshopper, bee, ladybug, spider and other insects; the squirrel, rabbit, rat, mouse, beaver, prairie dog and other rodents were all studied with much interest. The work in phonics was continued, introducing the consonant sounds *ch*, *sh*, *th* and *wh*; the long and short vowels, and all sounds of *a*.

The season of the year and the incidents of the term suggested topics for the morning talk as in the preceding years, many of the same subjects being treated with advantage by virtue of the personality of the teacher. Means of transportation; the different street-car lines; letters and their travels; the telephone; house lighting; the city—its water supply and sewerage system; ice—its production, transportation, storage, delivery and uses; and the daily weather report were some of the new subjects discussed.

The Normal second reader was read in connection with the new science work, part of the Franklin second reader was reviewed, the Normal third and Franklin third, Æsop's fables, Hans Andersen, the Health primer to page 61, and many hectographed sheets prepared by the teacher and relating to science work, were read.

The average of poems explained and memorized was nearly one a week. The daily writing on science work, varied by the transformation of poems and the reproduction of suitable prose selections, constituted the composition work of the grade. The technical grammar consisted in practicing the correct uses of the forms of various irregular verbs, the plurals and possessives of nouns, contractions and abbreviations, and direct and indirect quotations. The analysis of the sentence was begun, the child learning to differentiate the simplest forms of expression. The spelling was the new words in connection with the science work.

FOURTH GRADE.

The reading of the fourth grade children was always reproduced by the pupils, and toward the end of the year platform reading was begun. Here, as in all other grades, no copying of compositions was permitted,

but perfection was sought in the first draft. The subjects were the reproductions noted above, transpositions of Lily's Ball and Greek stories, and imaginative compositions of conversations of birds, animals, etc. Capitalization, punctuation, the use of the hyphen and quotation marks and drill on about fifty irregular verbs constituted the work in technical grammar. The child was encouraged to make good complex sentences; the results were oftentimes remarkable for their excellence. Many simple sentences were analyzed. (See notes 4 A to 4 R.)

FIFTH AND SIXTH GRADES.

The reading toward the end of the fifth year bore especially on the history and geography of the grade, selections being made from the Franklin intermediate reader and books of travel. The *Secrets of Flowers*, the *Metamorphosis of a Butterfly*, the *Blue Jay*, the *Paper Makers* and *Insect Life* were studied concretely, as far as possible, afieid and in the school room, many teachers having provided their schools with the necessary collections of material. Some memorizing of gems was done.

The study of the sentence in its entirety was prosecuted here and through the sixth and seventh grades. The work of the fourth grade, of finding the base of the sentence, was continued, more and more difficult sentences being mastered; the idea asserted was differentiated as to identity, condition—place, time, size, etc.—and action; and finally the idea was analyzed for its elements. Here the child began the study of the parts of speech in addition to being required to know the sentence—as a whole, its parts, bases, modifiers, asserters—whether emphatic, potential, absolute, etc. and what is asserted.

Evangeline was studied carefully by the sixth grade, very much talking being done by both teacher and pupil, as the object to be attained was the fluent use of correct English, the poem being used as a means to that end. The life of the poet was studied by the child, and especial attention was given that the child saw the pictures, the characters, the likenesses, the entire panorama and the artistic proportions of the poem. Many of the words needed special preparation before the first reading was attempted. As with all other reading in the course, the children were taught to prepare their work with the dictionary and atlas for constant reference, and they were as constantly held responsible for correct spelling, pronunciation, punctuation and transformation as these elements appeared in all their speech and writing.

The child wrote on all the subjects of the grade, but especially on *Evangeline*, physiology and history, a clear distinction being made between description and narration.

The study of the parts of speech was continued, being taken up in a miscellaneous way as they were encountered. As an aid to correct speech and writing, the analysis of the sentence was continued in this and the seventh and eighth grades until before going to the high school the child was able to dispose correctly of almost any English sentence. (See notes 5 A to 5 D, and 6 A.)

SEVENTH GRADE.

In the seventh grade the child was expected to correct his own mistakes as he talked, changing the form of the verb, changing elements from one class to another, using phrases instead of clauses and clauses instead of sentences. Here he was led more than ever to apply the analysis of the sentence which he had learned to his making of language, in all his conversation, in all his recitations, in all his written work. By the aid of lists of conjunctive adverbs on the blackboard he was encouraged to use complex sentences, employing the correct connectives. The correct relation of thought as expressed in the spoken and written language of the child was earnestly striven for. The study of the parts of speech was finished.

For specific reading the Normal fifth reader to Part V was taken. In poetry especial use was made of *The Chambered Nautilus*, teachers borrowing from the Smithsonian Institution the beautifully cut shell, so bisected as to show its chambers.

EIGHTH GRADE.

Analytical study was made in the eighth grade of several classics: *Sleepy Hollow*, for its refined humor and figurative language; *Snow Bound*, for purity of style and beauty of description; and *Merchant of Venice*, for character study. The pupil was reviewed in formal composition and taught to embellish narration with description, combine them in exposition, strengthen them by comparison and contrast, and beautify all by simile, metaphor and other figures of speech, selection, sequence and symmetry being especially emphasized. As through the child's whole previous course in school, he was encouraged to spell correctly from a desire to do so. Spelling was taught in all the grades when new words were about to be used and when the word used was misspelled. He was encouraged to exercise great care in punctuation, and the selection of words. (See note 8 A.)

ARITHMETIC.

The work in arithmetic was begun in the first grade with the number table, which had its compartments, four to each child, filled with shells, pebbles, acorns, small toys, etc., partly contributed by him, partly by the teacher. With these he learned to combine and separate numbers and throughout to speak more and more correctly and accurately. The child was made familiar with the use of the foot rule. The hand and eye were so trained that he could draw free-hand a vertical, a horizontal and an oblique line of given length with reasonable accuracy. With paper he made a neat, simple box, an envelope for his pencils and a calendar.

His eye and hand were further trained through the use of the Speer models. All the combinations and separations were emphasized in

connection with these prisms, their surfaces and edges. Calling the prisms boxes of candy, pounds of sugar, etc., the child learned the relations 1 to 2, 1 to 3, 1 to 4, 2 to 3, etc. He illustrated all his abstract and problematic work. In denominate number he learned by using the units about pints, quarts and gallons; quarts, pecks and bushels; and inches, feet and yards. By the end of the year he was familiar with the combinations, separations and fractional parts of numbers from one to ten.

In the second grade he continued estimating and drawing lengths; he constructed squares and oblongs, and learned the facts in connection with Giffin's first two charts and Speer's arithmetic through page 112. He learned to add, subtract, multiply and divide with numbers to twenty. He learned the two and three multiplication tables, and read the first half of Hall's second grade arithmetic reader. He constructed squares, circles, envelopes, penwipers, bookmarks, weather reports, calendars, clock faces and other similar problems.

In the third grade he reviewed the second grade work, finished Hall's second grade arithmetic reader, and read the first fifty pages of Hall's third grade reader. He had the first six charts of Giffin's arithmetic and the first lessons by the same author on area and volume. He learned all the multiplication tables not already learned and had numerous problems in addition, multiplication, subtraction and division. He also studied the relations of volumes as developed by Speer.

The child reviewed in the fourth grade the work of the third, using whole denominate and whole abstract numbers, verifying the results. He was given much oral work at sight in addition and multiplication, and he made and solved many problems with integers and fractions; abstract and denominate, and simple and compound numbers; squares and square roots, cubes and cube roots. The work was done objectively first, often in the field, as with the flower beds in the various public reservations, using the numbers of plants in rows, working on fences, determining the number of posts, quantities of materials, etc., paving sidewalks, plastering, papering, finding surface areas of models, etc., and then abstractly; much practice was had. By his use of Giffin he was enabled to make problems involving fractions in perimeters and areas, and considerable practice was had with relativities (Speer), until finally books were used to test his strength in the work done. (See notes 4 S and 4 T.)

In the fifth grade the work was a review of that previously done, the teacher dwelling upon those subjects which appeared to need additional attention; but heavier numbers were used than formerly, and promptness as well as accuracy was sought. Here percentage was begun and the child taught to indicate a solution of the problem in the form of a verbal statement. Emphasis was laid upon powers and roots, square measure, square root, cubic measure, cube root. (See notes 5 E and 5 F.)

In the sixth grade the subject of percentage, begun in the fifth, was

completed, mechanical processes being at all times avoided. During the review more time was given to individual defects than before. Here the child built mathematical fences, covered mathematical areas, dug mathematical ditches and wells, measured mathematical lumber piles, built mathematical water tanks, walls of stone, walls of brick, etc. (See note 6 B.)

The review in the seventh grade was finished by the first of November and the subject was completed in this grade. The child was also drilled more than ever in the use of English in connection with his arithmetic. As the course had not been completed in the seventh grade prior to last year the eighth grade covered the entire subject, summarizing and generalizing processes and relations, the work being largely individual and suited to the need of the pupil.

It will be readily seen that in arithmetic, as in other branches, the child must perforce have better command of himself by virtue of the variety of material and methods placed within his experience.

ALGEBRA.

In the seventh grade the child was inducted into algebra by being led to state many of the simplest of arithmetical problems in the form of the algebraic equation. In the eighth grade the subject was technically taught to fractions.

GEOGRAPHY.

Inasmuch as science study—the study of animal and vegetable life, the weather, the seasons, rain and snow, heat and cold—was begun with the child's school life, the study of geography was begun in the first grade; its study as such, however, was not begun until the third grade wherein the child studied direction, the points of the compass, various plans—that of his own desk, the teacher's desk, the school-room, the school yard, the block in which the school was located, surrounding blocks, and the plan of the city, finally visiting the Capitol to see the city's plan.

In the fourth grade the child studied soil and soil making, the formation of the earth's crust, rivers and valleys and their uses, representing natural features whenever practicable by the use of the sand board, reading collaterally from the Normal fourth reader, and memorizing suitable poems. The National museum was visited and biographies of prominent men were studied. (See notes 4 U to 4 CC.)

The child in the fifth year reviewed the work in soil, hills, continents, etc.; studied the growth of plants, life of animals, the work of water, and North America as outlined, and toward the end of the year the geography of North and South America and of current events. He learned of the condition of the continent when the first settlers came; the relativities between the two continents; their relation to the equator, to the seas, to the poles; the fauna and flora of North America; its peoples—how they live and in what they are engaged. He was taken

to the museum and zoological park to see representative animals. As in the third and fourth grades, much use was made of the sand board. (See note 5 G.)

In his sixth year much of his time with this subject was given to mathematical geography, each child having a four-inch sphere on which he located the poles, the equator, the small circles, the meridians (20° apart), and finally the continents, coloring the land appropriately and distinguishing the principal countries. Especial attention was given to the place geography of the history studied, as much for the purpose of establishing a habit of study as for the information acquired. (See note 6 O.)

In the seventh grade the child studied Shaler's *Our Continent*, the place geography of the work in history, discovering the locations, relative directions, sizes, etc., of the places mentioned. Much time was spent on the geography of questions involved in current history. He studied the North American continent as an entirety—its contour, its physiography, its drainage, reasons for settlements at the mouths of rivers, etc., the same plan being followed in the study of South America and Europe.

In the eighth grade much attention was given to the local physiographic conditions as found in the field, the physical features of the United States as set forth by Gilbert in the *National geographic magazine* of July, 1898, and Shaler's *United States of America*; and the earth through its various stages of geographic conditions, evolution of plant and animal life, and formation and deposition of its minerals.

HISTORY.

History was begun in the third grade, the child studying the lives of George Washington and Capt. John Smith and the history of the city of Washington.

In the fourth grade he had Powell's *Story of Two Inaugurations*, and collateral reading, such as the *Pine Tree Shilling*, as found most needful by the teacher in broadening the work. This gave the child a connected story of the thirteen colonies, the peoples, their habits and customs, their towns and cities, as well as their country life. Geography was taught in connection with all the history work wherever studied.

The Normal fourth reader furnished the history of the fifth grade. An idea was given of the conditions existing in this and the mother country when explorers first saw America. Here, as everywhere else in the course, much conversation was had between teacher and pupils and among pupils under the guidance of the teacher. (See note 5 H.)

The hardest work of the sixth grade,—history of the United States,—was begun in January, and was taught by the aid of four text-books, Eggleston, Montgomery, Barnes and Ridpath, though a few of the children used but one, some two, and others three of the four. The child was here given the narrative from the beginning to the end, so that he possessed a clear, connected, sequential view of the whole

subject. To this end much cross-section work was done including causes and results of wars, reasons underlying acquisition of territory, etc. Much supplementary reading was done, especially that in the Franklin fifth reader. For embellishment such selections as Mrs. Hemans's *In the Flag*, *The Revolutionary Alarm*, and *An Appeal to Arms* were learned. Nothing in any grade was "learned by heart" except some selections of good English, both prose and poetry. The Museum and Art gallery were visited in this connection. (See note 6 D.)

In the seventh grade the work began with the Revolutionary war and the child studied from the effect to the cause, introducing something of biography in the work, and finishing the subject of American history with the year.

English history was begun in the eighth grade to give perspective to the history and government of the United States.

CIVIL GOVERNMENT.

This subject was taken up in the first grade. It was introduced in the morning talk about the parks—why they were there, who put them there—the child's own school building and something of its supervision, the police and fire departments.

In the second grade the talk was of the mail, Thanksgiving, the schools, the Museum and the Zoological park.

In the third grade the child visited the Capitol that he might see the Senate, the House of Representatives, and the Supreme Court in session.

In the fourth grade the collection and delivery of mail matter, methods of lighting streets, the city water supply, the sewerage system, the Story of Two Inaugurations, the Congressional library and the Museum were studied.

In the fifth grade he learned of the government of the Saxons, Normans, Britons and American Indians; their manners, habits, pastimes and occupations.

In the sixth grade the rule and social conditions of the various European countries participating in the discovery and colonization of America, the government of the American colonies and the formation of the American nation were some of the themes that engaged his attention.

In the seventh grade he studied the government under the various presidential administrations.

In the eighth grade the government of the nation was the center from which emanated the study of the lesser units, the state, the county, the town, the city, and finally the District of Columbia which was studied with reference to the various departments and their practical workings as seen on numerous field trips.

PHYSIOLOGY.

Physiology was begun in the second grade and was continued through the grades, excepting the seventh.

In the second grade the child learned something of the human body, acquiring knowledge which was augmented in the third grade by the

teacher's development of the work in the first half of the Health primer on the study of bones, joints, muscles, tendons and nerves. In the fourth, fifth, sixth and eighth grades the subject was much used for language making, including composition writing, the work of exposition and development having been done objectively and the child often illustrating by drawings. (See note 5 I.)

PHYSICS.

This subject was taught from the first to the seventh grade, inclusive, though generally incidentally. In the first four grades many expositions and experiments were made illustrating the effects of heat and cold on gases, liquids and solids, the children learning to read the thermometer; showing the properties of matter, porosity, impenetrability, etc.; demonstrating some of the phenomena of magnetism, and finally making magnets with needles, thread and cork; explaining the composition of light as seen with the prism and of secondary colors as shown by the use of paints. They were taught also gravity and the principles of the lever.

In the seventh grade the subject was taken up specifically and taught through one hundred twenty experiments, as outlined in the teachers' manual published in 1889. (See note 7 A).

MISCELLANY.

Penmanship was taught everywhere; no book was used, but the child, when lacking, was given a correct form by the teacher on black-board or paper. He whose writing was poor was encouraged to write vertically, the effort resulting in an improvement on his old form.

We shall not attempt to write in detail of drawing, sewing, carpentry, cooking, music and the health exercises, since you will probably have reports from the heads of these various special branches. Concerning sewing, carpentry, cooking and the health exercises, however, parents seemed to realize more than formerly the value of the training. Rarely was an objection heard from a parent or child to any of these studies, but, on the contrary, children do not now want to attend school where these advantages are not had.

The science work was used both as a principal and as an agent; in the lowest grades chiefly as an agent for the teaching of language, but gradually it lost its use as such, until in the fifth and subsequent grades it was taught primarily for itself. In this connection the number of field lessons during the past year largely exceeded the number of any preceding year, being probably on an average of at least five per school, or a total of more than five thousand. As teachers come to recognize the value of personal experience the number will increase still more. There are yet many teachers who erroneously believe that the lesson afield is expensive in point of time, forgetting that knowledge gained through contact with things is wider in its application and much more permanent as to its retention. Some teachers put into a field lesson

nearly all the subjects of the course of study; being out primarily for a lesson in history, they teach geography, arithmetic, nature and language through all, no account being made of the physical benefit of the outing.

The schools were taught in two sections, excepting that many teachers divided their children into groups of half a dozen to fifteen, being controlled by the need of the pupils in the subject studied, always, of course, separating the individual when necessary for his personal advantage.

Whereas formerly all schools in a given building had the forenoon recess at one and the same time, during the past year the schedule was so changed as to allow the children of the first and second grades their outing separately from the rest of the schools and immediately after them.

At a number of the county schools there are plots of ground varying from a quarter of an acre to two acres. We would earnestly urge the consideration of the employment of a practical gardener to direct and teach at a number of these schools, especially those attended by colored children.

Could the telephones in our offices be made as satisfactory as those in private use generally are—and there is no physical reason why they could not—the extension of their service by connecting the various school buildings with their respective supervisory headquarters would very materially augment the efficiency of our administration. By connecting a single building or two in each division annually, it is believed that this extension could be readily effected within the present annual appropriation of five hundred dollars for school telephones.

Our teachers, a conscientious and faithful corps, come to their work unusually well prepared, owing to the high plane attained in their preparation and to a home environment of a singularly high order. Furthermore, they are constantly attending lectures and special classes, reading professional and supplementary literature, and otherwise and always cheerfully spending their time and money to enhance the value of the services they perform. It is only just to them, therefore, that in every practical way we make their work as pleasant and agreeable as possible, consistent with the best interests of the children of the schools.

It is with pleasure that the corps acknowledge their indebtedness to the board of trustees, the superintendent, the teachers and all others who have combined for the success of the work of the schools.

I am, very respectfully,

JOHN T. FREEMAN,
Supervising Principal, Eighth Division.

Mr. W. B. POWELL,
Superintendent, Public Schools.

4A. OUTLINE FOR SENTENCE ANALYSIS.

Subject: Base of subject.
Predicate: Base of predicate.
Kinds:
 Active.
 Passive.
 Neuter.
Base of sentence.

4B. ANALYSIS OF THE SENTENCE.

Give daily practice in separating sentences, including long complex sentences, into entire subjects and entire predicates. For this purpose take sentences as they occur in the readers or other text-books. Find also base of subject and base of predicate. In this exercise deal only with the two great parts of the sentence, paying no attention to minor elements. Give six weeks to this work, with the sentence as a whole.

Then take modifying or subordinate elements as wholes, showing that with every added element ideas are added to the bases. Give much practice with modifying elements as wholes before naming them or classifying them.

The study of word elements may now be begun.

The predicate may now be divided into two parts, the asserter and that which is asserted. Teach the latter as expressing time, condition, place, identity or action of the subject.

The work for this period is mainly the sentence as a whole and the subordinate elements as wholes.

The word element should be studied in detail.

4C. GRAMMAR.

(a) The pupils, though not yet taught the parts of speech in detail, should be able to recognize the noun, verb, adjective and adverb, using the words familiarly, in order to understand the meaning of adjective and adverbial modifiers in the sentence.

(b) *Verbs*.—Teach the forms of many verbs; two present, the past, progressive and complete. Develop the future tense; discover how expressed. When pupils are strong enough, find how completed action is expressed in each of the divisions of time.

Make a list of verbs studied. Review and make use of third grade "grammatical idiom."

4D. WORD ANALYSIS.

Word analysis should not be limited to the word work in the speller, but attention should be called constantly to variations in word forms wherever found. Let the words *prefix*, *root*, *syllable*, *synonym* be in familiar use. Study the effects of prefixes and suffixes on the meanings of words.

4E. SPELLING.

Require the spelling of all words used by the pupil. Divide words into syllables for spelling and pronunciation. Teach accent. Review thoroughly the formation of plurals and possessives, and the uses of capitals in writing proper names. Place dictionaries where they will be accessible and require their use.

4 F. COMPOSITION.

Write paragraphs daily, generally as seat work.

Subjects:

- (a) The flower and bird work suggested.
- (b) Physiology.
- (c) The sentence and parts thereof.
- (d) Reproduction of poems.
- (e) Accounts of outings.
- (f) Story of a grain of sand.
- (g) Letter describing the childrens' experiences at the last inauguration, based on their subsequent readings.
- (h) What a river does.
- (i) The Potomac river.
- (k) Coral and coral islands.
- (l) The importance of the Ocean; what it does and what it undoes.
- (m) Description of a flower.
- (n) A bird story (invention).
- (o) Reproduction of an old Greek story.

4 G. SELECTIONS OF POETRY—FOR CHOICE.

Robert of Lincoln. Bryant.
 The Gladness of Nature. Bryant.
 The Death of the Flowers. Bryant.
 The Spider and the Fly. Mary Howitt.
 September. H. H. Jackson.
 October's Bright Blue Weather. H. H. Jackson.
 March. H. H. Jackson.
 Down to Sleep. Saxe Holm Stories.
 Seven Times One. Jean Ingelow.
 The Children's Hour. Longfellow.
 Autumn. Longfellow.
 Hiawatha's Childhood. Longfellow.
 The Village Blacksmith. Longfellow.
 In School Days. Whittier.
 The Barefoot Boy. Whittier.
 The Corn Song. Whittier.
 The Huskers. Whittier.
 The Harvest Hymn. Whittier.
 The Frost Spirit. Whittier.
 Jack-in-the-Pulpit. C. Smith. (Child Life.)
 Indian Summer Revery. Lowell.
 June. Lowell.
 The First Snowfall. Lowell.
 Christmas. Lowell.
 The Fountain. Lowell.
 Piccola. Celia Thaxter.
 The Sandpiper. Celia Thaxter.
 The Robin. Celia Thaxter.
 Sing Little Bird.
 We are Seven. Wordsworth.
 The Cuckoo. John Logan.
 The Flower of Liberty. O. W. Holmes.
 The Brook. Tennyson.
 Autumn Song. E. C. Stedman.
 The First Robin. E. C. Stedman.

The Poet Laureate (Bluebird). T. B. Aldrich.
 Golden Rod. Lucy Larcom.
 The Tree. Björnstjerne Björnson.
 The Pied Piper. Robert Browning.
 While Shepherds Watched. Margaret Deland.
 The Frost. H. F. Gould.
 Jeannette and Jo. Mary Mapes Dodge.
 In Time's Swing. Lucy Larcom.
 Alpine Song. W. W. Story.
 The Old Oaken Bucket. S. Woodworth.
 The Dying Soldiers. Anon. (McGuffey's fourth reader.)
 Trust. Anon. (Hoitt's Excellent Quotations.)
 It Snows. S. J. Hale. (McGuffey's fifth reader.)
 Summer Longings. George Arnold. (McGuffey's fifth reader.)
 The Skylark. Shelley. (Normal fourth reader.)
 My Country. S. J. Smith. (Normal fourth reader.)
 The Star-Spangled Banner. Key. (Normal fourth reader.)

4 H. NATURE WORK—BIRDS.

(a) The study of birds, mammals, insects and flowers constitutes the nature work of the grade for the rest of the school year. All these subjects, except mammals, are to be taken up immediately and carried on until the close of the year. They are interrelated in nature, and in studying them the pupil is to follow nature's order. While searching for wild flowers the pupil will take notice of the song of the bird near by. He will observe the insect upon which the bird preys or which in turn preys upon the flower. By relating the study of these subjects in the way suggested, the interest of the pupil will be greatly incited, his pleasure in learning promoted and his progress in the study greatly increased. The purpose of the work is to cultivate a love for nature, to increase the power of observation, to learn and classify some facts in each subject and to obtain material for expression—oral, written, graphic and musical. To aid the teacher, slips giving suggestions concerning methods, etc., will be furnished by the supervising principal from time to time.

(b) In the first stage of the study of birds the work of the pupil is observing and recording his observations. During the period above noted let him find for himself all that he can about the birds now to be seen in the city and its neighborhood. Encourage him to go to the parks within the city and to the suburbs to listen and to wait for the birds. Pupils will not need urging to do this if they see that the teacher is interested in it. Set off fifteen minutes daily for nature talks, during which time let the pupils tell what birds they have seen, what bird song heard. The duty of the teacher is chiefly to guide the activities of the pupils. Cause them to discover as many kinds of birds as possible.

About each of the birds studied note the appearance, song, habit of building its nest, its food and how it gets it, its relation to man, etc. Ask pupils to have pocket notebooks (a very simple one will do) in which to record their observations. Write on the blackboard important observations, with the name of the one making each, e. g., "Mar. 24. The first robin, seen by John Smith." After a week or so of this work the teacher should secure specimens of several of the birds studied and have the pupils describe them and draw them. Also have a live bird in the room. Teachers may take their pupils to the fields or parks whenever it is suitable to do so.

To aid the teachers to know what the pupils are likely to find at this time the following notes about the birds of the District, which are not intended for the pupils, are given:

The birds of the District of Columbia may be divided into four classes: (1) permanent residents, (2) winter residents, (3) summer visitants, (4) spring and winter migrants.

Permanent residents are those families of birds of which some individuals can be found here at any time. Among them are the robin, bluebird, tufted titmouse, brown creeper, cedar waxwing, goldfinch, grassfinch (vesper bird), English sparrow, song sparrow, cardinal grosbeak, meadow lark, woodpecker, crow, hawk, turkey buzzard, owl, snipe, woodcock, mallard, dusky duck and canvasback duck. The last five, being game birds, are not to be found near the city, but can be seen in the markets.

Winter residents are birds which come from the north in the late fall and go back again in the spring. Among them are the shore lark, skylark, yellow-rumped warbler, purple finch, snowbird and tree sparrow.

Summer visitants are those which pass the summer here. Of this class the crow blackbird is common.

Take as a special topic with the foregoing "The migration of birds."

Read several of the following-named poems while doing this work: "The Sandpiper;" "The Robin;" "Sing, Little Birds," Celia Thaxter; "The First Robin," E. C. Stedman—in the Normal Fourth reader.

4 I. BIRD STUDY. APRIL AND MAY.

During this period have pupils continue to observe birds and to record and tell what they have seen. One test of the success of the schoolroom work will be whether pupils grow in desire and power to see birds. A habit can soon be formed to make the most of the fleeting opportunity to observe the bird near by. Train pupils to look for distinguishing characteristics. While all pupils will not be able to see all the birds to be seen yet the combined records of all the pupils will make a long list. The height of the bird season is between April 20 and May 20. The birds named in the preceding outline will continue to be seen, while the ones herein named will appear later. Study the parts of birds—head, wings, tail, feet, covering. How are birds able to fly? Do not tell pupils anything about birds which they can discover for themselves. Among the interesting birds soon to be found are the following: white-throated sparrow (Peabody bird), a migrant, April 15; red-eyed vireo, a summer resident, April 25; mockingbird, catbird, yellow warbler, summer residents, May 1; scarlet tanager, migrant; ruby-throated hummingbird, summer resident; bobolink, migrant.

Special topics for conversation and reading during this time are nest building and incubation.

Read lessons in the Normal fourth reader that fit the work done in the schoolroom. Also, Robert of Lincoln, W. C. Bryant; Don't kill the birds, Colesworth; etc.

4 J. SUGGESTIONS FOR BIRD WORK. APRIL AND MAY.

1. In general, study the skeleton of the bird; body; covering.
2. Study the duck. Observe and discuss the swan, gull, etc. From adaptation of parts establish the group of water birds.
3. In a corresponding way, study the hen, turkey, etc.—land birds.
4. Robin, canary, swallow, etc.—air birds.
5. Observe, as far as possible, and discuss and classify the following: thrush, blue-jay, crow, swan, woodpecker, grebe, hummingbird, goose, eagle, buzzard, etc.
6. Study habits of the above-named birds.
7. Read and write about them.
8. During the progress of the work visit the Zoological park and the Smithsonian.
9. Have one specimen, at least, of the group being studied, in the schoolroom.

4 K. NATURE STUDY—BIRDS. MAY AND JUNE.

Continue to observe, investigate, and record as time and opportunity permit. Have pupils make lists of birds observed and identified. Keep alive the pupils' interest in this work.

Study the structure of birds. Use for this purpose a skeleton of a bird, stuffed and live birds. Discover the adaptation of the feet, legs, wings, etc., to the habits of birds. From this study make a classification of birds—land, water, and air birds. Have pupils separate the birds on their lists into these groups. Continue to read, draw, and write in connection with this study as opportunity permits.

4L. SUGGESTIONS FOR THE STUDY OF FLOWERS. APRIL, MAY AND JUNE.

One or more lessons a week, depending on availableness of material and preparation of teacher.

Purpose: first, to observe the relation of the flower to the reproduction of the plant; second, to learn the parts of the flowers and to classify flowers.

1. Examine many fruit blossoms. At intervals, note the development from flower to fruit. This work to extend into June.

2. Examine many flowers, the wild flowers in their season, and cultivated flowers. Incidentally, review the second and third grade work, learning the parts of plants, what plants do, and the parts of flowers. Establish the classes mono- and poly-petalous, perfect and imperfect flowers. From the study of the several whorls, establish the classes, complete and incomplete, symmetrical and unsymmetrical flowers.

3. Read in their proper connection the lessons in the Normal fourth reader, pages 73-105, and 132-140.

4. During the above, have the pupils draw many flowers and write many paragraphs:

Little Flower Folk, and The Fairyland of Flowers, both by M. L. Pratt, will be helpful to teachers.

4M. FLOWER STUDY. MARCH AND APRIL.

The remarks made upon nature study apply to the work with flowers indicated in this and succeeding slips. The distinctive purpose of this flower study is to observe the relation of the flower to the reproduction of the plant. This implies an observation of the plant, the bud, the flower, the fruit. It will be possible to note all these stages of the growth of the plant before the close of the school year by making a proper selection of specimens to be studied, and by following the development of the same through their successive stages. Along with this work go the collecting and studying of many flowers. Let the pupils record in their notebooks the flowers studied in school.

The special topic for the next two weeks is the awakening of plants; the signs multiply all around. Observe the trees and the flowering shrubs in the parks and streets, and the wayside flowers. Study the catkins, pussy willows. Watch the development of the lilac flower from the bud. Obtain and study several wild flowers. By the end of this period pupils should know the parts of the plant and flower.

To aid the teacher the following list of flowers now to be found is given: weeping willows, dwarf gray willow, silver and red maple, white poplar, slippery elm, hepatica (crowfoot family), blood root (poppy family), trailing arbutus (heath family), shad blow (rose family—an important family to which belong the rose, flowering almond, peach, plum, cherry, apple, pear, quince), saxifrage, dandelion (compound), etc.

Have specimens in the room all the time. Describe—orally and in writing—draw, color, compare.

4N. FLOWER STUDY. APRIL AND MAY.

The distinctive purpose of the study of flowers being to see the relation of the flower to the life of the plant, the pupils should discover the nature and uses of the several parts of the flower and distinguish the essential from the nonessential parts. Define perfect and imperfect, staminate and pistillate flowers.

Fertilization.—Study the different ways of fertilizing flowers. Study the parts of the stamens and pistils and find the uses of each.

Development of ovary.—Watch the growth of the ovary in each of several flowers studied. Discover its relation to the plant. Vary specimens studied enough to show the several kinds of fruits—dry, stone, fleshy.

From a study of the several sets of organs of flowers develop the terms—mono-petalous, polypetalous, complete, incomplete, symmetrical and unsymmetrical. Use the terms, when known, in analyzing.

Study as many flowers as time will permit, using fruit blossoms at frequent intervals.

While it is desirable to obtain the definite results noted in the foregoing instructions, the teacher should remember that the work will fail to attain the fullest measure of success if it does not contribute to the happiness of the child by making him better able to see the beauties of the world of flowers.

40. FLOWERS. MAY AND JUNE.

Continue the lines of work already begun to the end of the year. Observe growing fruit which has been produced from flowers of the kinds studied by the pupils.

As a measurable result of the work done during the year, pupils should be able to tell the parts of the plant, the parts of the flower, the use of each part of the flower; to distinguish between the essential and the nonessential parts; to understand the use of the terms—perfect and imperfect, complete, symmetrical and unsymmetrical, mono- and poly-petalous, mono- and poly-sepalous, and to identify a number of examples of each. They should understand the relation of the flower to the plant and to its fruit.

Continue to use flower study as the basis for language work.

4 P. INSECT WORK. MARCH TO JUNE.

(a) Teachers of this grade are expected to place more emphasis than heretofore on this phase of nature study. Extend the work of the lower grades by arousing greater interest in the subject among pupils and thereby develop a higher appreciation of its importance.

To accomplish this the study of insects must be made, wherever possible, a study of life, of action, and adaptation to function, rather than of mere form and structure.

Begin as early in the development from egg to adult as the season permits.

By collecting cocoons without delay, the transformation to butterfly or moth may be observed this spring. Collect and preserve material for future class-room work. Relate the study to other nature work. Broaden the ideas (gained by observation in previous years) of the typical insects (3 parts, 6 legs, etc.), by emphasizing more than ever the need for making the insects now observed and studied, types of those not seen.

(b) *Cocoons.*—Secure many cocoons at once. Study position (kind of tree, how fastened, how protected), shape, color, texture, uses. Endeavor to have transformation of butterfly or moth in each school.

(c) *Caterpillars.*—Natural order should require study before cocoons, but season prevents. Study home, food, habits (manner of moving, length of life, circumstances of entering pupa state, as (1) cocoon or (2) underground), appearance, including size, color, shape, segments, covering, etc. Secure a dark brown hairy caterpillar (sometimes called *Isabella*), the yellow woolly bear caterpillar, the yellow horned caterpillar, vine worms and tree worms, for the study of habits.

(d) *Butterflies and moths.*—Study habits, including manner of moving and structure (very brief), home, food, including methods of obtaining, differences between butterfly and moth, deposition of eggs, etc.

Secure as many varieties for collection as possible, including the milkweed and

cabbage butterfly, the silverspot, etc., and also silk moths (ailantus, polyphemus, brown cecropia), sphinx moth, hawk moth, etc.

After teaching one or more of the silk worms and moths above mentioned direct the attention of the children to the silk industry, the raising of caterpillars, the obtaining of cocoons, the manufacture of silk in many countries; let the children see, handle and unwind silk cocoons; show how these were spun; visit the insect department of the U. S. National Museum; also the frame museum in the rear of the Agricultural department building.

(e) *Wasps*.—Different kinds. Note especially paper makers and mud daubers—two varieties of paper makers; first, the yellow jacket or hornet; second, the long-bodied black wasp. The social wasps or paper makers have three forms—males, queens and workers. Examine and describe the nests of—

(1) Yellow jacket (combs within large envelope).

(2) Black wasps (single comb without envelope).

(3) Mud daubers (globular mud cells).

As these insects are too irritable to investigate their habits very closely, greater latitude in explanations must be permitted.

(f) *Final lessons*.—Classify insects as sheath-winged, scale-winged, two-winged, etc., selecting insects not previously studied. Give due emphasis to beauty of form, color and adaptation. Show relation to man (beneficial or injurious). Point out means of defense, mimicry, symbolism of transformation or metamorphosis. Read appropriate poems.

4 Q. INSECTS.

Study of butterflies and moths.

Aim to bring to the child's notice the whole cycle of changes in the metamorphosis of insects, thus showing by observation, rather than by hearsay, one of nature's most beautiful symbolisms.

Lesson I.—Bring collections of butterflies and moths into the schoolroom and let the children examine the perfect insect, noting especially size and beauty. Compare, describe, draw, mold, paint. For the purpose of—

Lessons II-IV.—Comparing butterfly with moth, give three lessons on structure, viz, head, thorax with its appendages, and abdomen (three lessons only).

Lesson V—Eggs.—If a leaf with eggs upon it can not be obtained at this season, then bring pictures, photographs, etc. The children can obtain some slight knowledge of the great variety in shape of butterflies' eggs, also of the similarity in color (green, white or brown) to the color of the leaf.

Lesson VI.—Develop the term larva. Bring in, if possible, caterpillars and worms (a few ailantus worms still remain on the trees). Note size, color, shape (segments), covering, etc. Describe orally.

Lesson VII.—Talk about the home of caterpillars and worms (kind of tree or plant); their food; their habits, showing manner of moving, length of life, circumstances of entering pupa state—(1) cocoon, (2) underground.

Lesson VIII.—Read *A Lesson of Faith*, pages 307-312 of *In the Child's World*, by Emilie Poulsson. The teacher is also referred to pages 302, 306, 308, 316 in the same book.

Lessons IX-XII.—Develop the terms pupa, cocoon and chrysalis. Collect, examine and preserve many cocoons. Note their position, shape, color and use. Keep cocoons in pasteboard boxes, moistening them occasionally, whenever it rains, by immersing or sprinkling. Plan to have many instances of transformation to butterfly or moth in your schoolroom. Begin collecting cocoons without delay.

Lesson XIII.—Show other collections of butterflies and moths. Read *Such a Beauty*, pages 317-320 of *In the Child's World*. Subsequent lessons: In the spring

amplify lessons V, VI, VII and VIII, with object in hand. Let some pupils paint the series or mold in clay: First, a leaf with tiny eggs upon it; then the caterpillar; then the cocoon (or chrysalis) and finally the butterfly or moth.

Other work: During the winter months study wasps (kinds, food, homes, habits, etc.).

4R. ANIMAL STUDY—FOR CHOICE.

The Insect World. Louis Figuier.

Harris's Insects Injurious to Vegetation.

The Honeybee. L. L. Langstroth.

Glimpses of the Animate World. James Johonnot.

Natural History. Wood.

Reports of Agricultural Department: How to Collect and Preserve Insects, etc.

Locusts and Wild Honey. John Burroughs.

Wake Robin. John Burroughs.

Bird Songs, etc. John Burroughs.

Spiders' Webs. Science for All, page 176.

A Butterfly. Science for All, page 65.

Legs and Feet of Insects. Science for All, page 73.

Anatomy of Ants. Science for All, page 189.

Ants and their Ways of Life. Science for All, page 153.

A Cockroach. Science for All, page 325.

Friends Worth Knowing.

What Darwin saw.

Child's Book of Nature. Worthington Hooker.

Seaside and Wayside. Julia McNain Wright.

Life and Her Children. Arabella B. Buckley.

4S. FOURTH-GRADE WORK IN NUMBER TILL CHRISTMAS.

Notation..... {Arabic, to millions.
 {Roman, to five hundred.

Kinds of work:

- | | | |
|--|--|---|
| 1. Concrete (largely oral work). | { Addition, subtraction, multiplication and division, involving changes. Talk about tables—name them, e. g., long measure, liquid measure, etc. Compare lines, areas, surfaces, contents, weights, quantities. | Use the books, paper, desks and other paraphernalia of the schoolroom, as well as other objects or illustrations, in all this work, and also the first nine charts in Giffin's arithmetic and similar figures, though these would be better cut out of paper, each pupil having a copy. |
| 2. Integral | { Use small numbers for quick oral work. | |
| 3. Fractional | { Use small fractions.
Compare fractions. | |
| 4. Abstract | { Addition—long columns of heavy numbers.
Subtraction—involving changes in the minuend.
Multiplication—two figures in the multiplier.
Division—short division. | |
| 5. Problem work for language. Have the children make many statements. | | |
| 6. Arithmetic readers to be used as reading books, but not until the subject-matter of the particular lesson is thoroughly understood. | | |

4T. ARITHMETIC WORK TO FEBRUARY 10, 1899.

Long division continued—proof.

Squares, 1 to 144; square roots, 1 to 12.

Cubes, 1 to 1728; cube roots, 1 to 12.

Denominate work: Use long measure, inch to mile, inclusive.

Square measure, square inch to square rod.

Cubic measure, cubic inch to cubic yard.

Reduction—ascending and descending; apply the four processes, involving fractions. (Multiply and divide by $5\frac{1}{2}$ and $16\frac{1}{2}$, etc.)

Problems; statements: Note.—In connection with denominate numbers do much measuring, estimating and comparing.

Giffin: Chart VIII; Lessons I to VI, pages 5 to 10, part 11; reading lesson 2, page 22, part 2.

APRIL 13 TO JUNE 21, 1899.

Arithmetic: Giffin, continued; part 1 to chart 11, page 54.

Problems 105 to 115, inclusive, pages 83–84. Part 2 to page 34, omitting the most difficult "suggestive questions" on charts; part 3 through lesson 8. In connection with this work consult Speer's arithmetics.

NOTE.—It is not necessary to follow the order of the book in doing the work indicated above. The three lines of work can well be carried along at the same time. Review work already done and keep it well in hand all the time.

4 U. WATER.

Finish by November 4.

Source, ocean, sun, evaporation. Several lessons reviewing third-grade vapor work. Rainfall—distribution: Underground, surface, streams and bodies, evaporation. Give several lessons, illustrating and reading related matter.

Effects of water, chemical and mechanical. Decomposition of rock, producing soil. Other agents in disintegrating rock. Kinds of soil. Uses of soil.

Mechanical effects of water, by freezing, by carrying away soil; forms resulting from latter.

Give several lessons on soil. In a lesson or two touch on the effects of flowing water and the forms thereby produced.

Read related matter in geographies and readers.

4 V. SPRINGS AND RIVERS.

Lesson 1.—Show by use of sand board what becomes of rainfall. Flows, why? Slopes. On surface, underground, springs, etc. Read lesson 9, Frye's Complete geography. Develop terms, stratum, strata, permeable, impermeable, pool, pond, etc.

Lesson 2.—Underground water. What becomes of it? Roots, springs, wells. Read lesson 10, Normal fourth reader. Read first half lesson 10, Frye's Complete geography.

Lesson 3.—Spring water. Dissolve in water, soda, salt or lime. Mineral springs. Tell about some. Read page 38, Normal fourth reader.

Lesson 4.—Hot springs in volcanic regions. Geysers. Show pictures. Read chapter 28, Our Own Country.

Lesson 5.—Surface water. Natural reservoirs, swamps, ponds, lakes, snow and ice, and streams. Artificial reservoirs, ditches, canals. Talk about irrigation, waterways of commerce. Read pages 188, 189, Our Own Country. See picture, page 203, Our Own Country. Read lesson 12, Geographical reader.

Lesson 6.—Snow and ice. Glaciers. Use illustration of making snowball. Formation, movement, size, streams from, effect of. Read lesson 17, Normal fourth reader; lesson 13, Frye's Complete geography.

Lesson 7.—Streams. Water flows. Why? Divides, water partings, slopes—primary and secondary. River basin. Mold one. Read lesson 11, Normal fourth reader; first half of lesson 14, Frye's Complete geography.

Lesson 8.—River basins. Boundary, size (depends upon what?). Slopes. In what part is the river located? Why? Tributary basins. River system. Develop terms: source, mouth, bed, banks, channels, current, valley, tributaries. Read Normal fourth reader, pages 42, 43, and 44; Frye's Complete geography, lesson 15; Frye's Primary geography, lesson 17; Our Own Country, chapter 2.

Lesson 9.—Work of rivers. Cause of flow? Where swiftest? Why? Effects of flowing water, erosion, transportation of sediment, deposition, valley making, hill making, etc. How are the course and flow of streams affected by their beds, banks, etc.? Account for rapids, falls, winding course, etc. Read Geographical reader, lessons 6 and 7.

Lesson 10.—What becomes of sediment? Flood plain, delta. What does the color of flowing water show? Freshets: What are they? Cause? Effect? Uses of rivers. Read Geographical reader, lessons 8 and 9; Normal fourth reader, lesson 12.

Lesson 11.—Using their geographies, have pupils find the natural boundaries of the following rivers: Potomac, Mississippi, Mackenzie, St. Lawrence. Then mold a river system and its boundaries. Read Geographical reader, lessons 10 and 11.

Lesson 12.—Review last lesson. Study from maps Hudson Bay system (basin), Atlantic system of rivers, Pacific. Read from the several geographies.

Lesson 13.—Find in maps, name, and locate the Amazon, Nile, Danube, Volga, etc. Read the text about them.

Lesson 14.—Review. Unify the work. Topics: Rainfall, underground and surface water, water parting, watershed, rivers, river basin, river system, work of water, delta, uses of rivers.

4 W. COAST LINES.

[See Parker's How to Study Geography, pages 178-182.]

Lesson 1.—Illustrate wave action by suspending a long rope and making waves in it, by a pan of water, etc. Study pictures of waves in the geographies. Obtain from pupils the causes of waves. Tides—number per day—ebb, flood. Tides in the Potomac at Washington.

Forms: Waves, swells, surf, breakers.

Lesson 2.—Read lesson 21, Frye's Complete geography, and The Sea, pages 19 and 20, Normal fourth reader. Have pupils learn the first stanza.

Lesson 3.—Mold land sloping to the ocean—coast—coast line. Mold coast with hills and mountains near it. Show effects of tides and waves on coast. Show how gulfs, bays, etc., are formed—wearing away, subsidence, and submergence. Study pictures.

Lesson 4.—Review briefly. Read first part lesson 22, Frye's Complete geography; pages 60 and 61, Normal fourth reader; pages 15 and 16, Frye's Primary geography.

Lesson 5.—Show many pictures of shore forms. Have pupils mold and draw shore forms. Name them—compare and contrast them.

Lesson 6.—Name and locate the most prominent capes, peninsulas, bays, gulfs, etc., on the United States coast.

4 X. OCEANS.

Lesson 1.—One vast body of water spread between the continents—several branches—name and compare these.

Lesson 2.—Read page 108, Guyot's Geographical reader; also, lesson 7, Frye's Complete geography.

Lesson 3.—Read page 108, Geographical reader.

Lesson 4.—Uses of the ocean; source of rain supply, tempers climate, highway of commerce, source of food supply, receptacle for land drainage, etc.

Lesson 5.—Review waves and wave action.

Lesson 6.—Review tides.

4 Y. ISLANDS.

Lesson 1.—With sand board illustrate formation of river islands and delta islands. Have children tell about islands seen by them.

Lesson 2.—Read pages 49-53, Normal fourth reader, and lesson 17, Frye's Complete geography.

Lesson 3.—Show how some islands are formed by uplifting of earth's crust. Review lessons 6 and 7, Normal fourth reader. Read lesson 14, Normal fourth reader.

Lesson 4.—The bottom of the sea. Coast line, what is it? Does the land slope and where? Review briefly the degradation of the land surface, transportation of materials by streams, and its even disposition over sea's bottom. Darkness of the deep sea—life of the sea.

Lesson 5.—Read lesson 4, Normal fourth reader.

Lesson 6.—Coral islands—examine specimens of coral. Show pictures of coral islands. Read lesson 54, Normal fourth reader.

Lesson 7.—Read In the Coral Grove, page 56, Normal fourth reader, having children commit a part to memory.

Give several lessons reviewing and unifying the work, studying the map of North America, and locating important islands, etc. Read related matter besides that already noted. Write daily.

4 Z. HILLS AND VALLEYS.

Lesson 1.—Field lesson. Pupils should visit a place where hills can be seen. Find out of what a hill is composed (find a cut in a hill). Note slopes carefully. See the plains and valleys near by. Develop terms, foot, summit, ascent, etc. Observe the kinds of slopes—gradual, steep, abrupt.

Lesson 2.—Sand board lesson. Let several pupils mold a hill on the sand board, the others observing and criticising the work. Pupils should endeavor to reproduce a hill which they have seen. Have all the pupils draw the hill. Use familiar terms.

Lesson 3.—Sand board and drawing lesson. Repeat lesson 2, having other pupils mold at the board. Develop terms not already used.

Lesson 4.—From observation and pictures note the variety in size and shape of hills. Chains of hills. Mold and draw a chain of hills. Questions: What is a hill? What is a slope? How many directions has a slope? Where do slopes terminate?

Lesson 5.—This lesson is for the purpose of showing that the size and shape of hills are affected by rain, sun, frost, etc. The effect of water can be noted on any bank near the school. Show by familiar illustrations the effect of the other agents named.

Lesson 6.—Valleys. Where do slopes end? What was seen at the bottom of the hills visited? Develop terms, valley, plain. Have pupils tell of valleys they have seen.

Lesson 7.—Valleys. What makes a valley? Illustrate in a number of ways. Show that soft rock is more easily worn away than hard rock. Why are some valleys wide and others narrow?

Lesson 8.—Discover the uses of hills. Drainage. Why are not rivers found on hillsides?

Time limit.—Teachers should finish the work on soil, and hills and valleys by December 1. If soil is finished by November first, two lessons a week will be enough to give to hills and valleys.

Before teaching the lessons noted above, teachers should read *How to Study Geography*, pages 85 to 133 and 143 to 183.

4 AA. CONTINENTS.

NOTE.—The teacher should strive to supplement the work hereinafter indicated by using all the means of illustrating the subject at his command in order to insure to the pupils an adequate conception of the world as a whole—vast, but measurable—with its divisions of land and water, also much larger than anything which has heretofore been studied by them.

Lesson 1.—Continents. Definition (see Webster's International). Two kinds; first, a united land mass raised above the ocean level—the Eastern, Western and Australian; second, a grand division of a united land mass—Europe, Asia, Africa, North and South America and Australia.

Lesson 2.—By sand boards and maps show first meaning. Use globes. Read first half page 13, Swinton's Grammar-school geography. In like manner show second meaning. Read lesson 6, Frye's Complete geography.

Lesson 3.—Use globes to show position of the grand divisions; direction of one from another. Read lessons 2 and 18, Normal fourth reader.

Lessons 4, 5 and 6.—Compare grand divisions; relative size, greatest length; the trend of the mountains with the length of the continent. Compare magnitude of rivers—examine relief maps, pages 28, 51, 62, 74, 88, and 96 in Frye's complete geography.

4 BB. MOUNTAINS.

Lesson 1.—Aim: To form a concept of mountains. Show many pictures of mountains (Frye's Primary and Complete geographies). Have pupils tell of mountains which they have seen. Have them note differences between hills and mountains. Resemblance. Read lessons 4 and 16, Geographical reader.

Lesson 2.—Aim: To teach the formation of mountains. Show how mountains are formed by wrinkling of the earth's crust, by weathering and erosion. (Teacher consult First Book in Geology, Chapter V, and Frye's Complete geography, p. 14.)

Lesson 3.—Mold and draw a mountain, a mountain range. Develop terms, range, peak, precipice, chain, etc. Locate and describe the Appalachian highland, the Rocky mountains. (See Frye's Primary geography, pp. 36, 37 and 40.) Draw the diagram in Parker's How to Study Geography, page 28. Use relief maps in the several geographies.

Lesson 4.—*Volcanoes.*—Show pictures of volcanoes. Draw on the blackboard the picture on page 89, First Book in Geology. Lava—what is it? Whence does it come? Why is it hot? Develop terms, volcano, crater, eruption, lava plain. Read lesson 7, Normal fourth reader. Read to pupils the account of Vesuvius found on page 79, Frye's Complete geography, and also page 15. (Teacher consult Eclectic Physical geography, p. 278, volcanoes.)

Lesson 5.—*Earthquakes.*—Review the topic, wrinkling of the earth's crust. Then read lessons 3 and 7 Normal fourth reader.

Lesson 6.—*Canyons.*—Review valley making. Types of valleys, sloping sides, steep sides. Rock creek valley. Potomac valley above and below Aqueduct bridge. Pictures, pages 45 and 49, Frye's Primary geography. Read lesson 17, Geographical reader. Study Colorado canyon, page 38, Frye's Primary geography. Show photographs of same.

Lesson 7.—*Coal.*—Show specimens of coal, both hard and soft. Lead children to see that it is vegetable matter; that it is made from growth of trees, plants, etc. Conclusions—the growth occurred on the surface of the earth, in the sunshine, etc.; it was buried, pressed, heated, covered with rock for many ages. How obtained now. Read lesson 16, Normal fourth reader, and First Book in Geology, pages 49, 50 and 51.

Lessons 8 and 9.—*Review.*—Unify the work. Show the uses of mountains; condense water vapor, causing rainfall; act as reservoirs of water; afford soil to enrich the low lands, etc.

Read related matter.

4 CC. GEOGRAPHY—APRIL AND MAY.

It is desired that the pupils of this grade do the work indicated below after completing the physical geography prescribed in the course of study. This work is designed to increase the pupil's knowledge of his home surroundings and to acquaint him with other places which through their products (agricultural or industrial) affect him in his home. By means of conversations, readings, study of pictures, maps, etc., the pupils can learn in a natural way much about places, modes of living industries, means of transportation, etc. In this way geography becomes a living interest.

District of Columbia.—Situation, boundaries, cut by Anacostia river and Rock creek. Contains Washington city and other places, e.g., Anacostia, Tenley, Brightwood, etc. One government for all.

Washington city.—Location in District, extent, sections, local names, water supply, means of lighting, schools, city and suburban railroads—how operated, route of each.

Connections.—Potomac river (navigation), roads, canal, railroads. In connection with each of these note distinctive utility. Observe that railroads diverge to widely separated regions; north, northwest, west, southwest, south. Emphasize relative directions from Washington of all places studied.

Places, industries, etc.—Follow suburban railroads to nearby places and show their relation to the life of the city. Then by the other ways of travel visit typical places, where coal, ice, grain, iron, cotton, lumber, wool, etc., are obtained, and where flour, cotton goods, woolen fabrics, etc., are made.

5 A. ANALYSIS OF THE SENTENCE.

(a) Give daily practice in separating sentences, including long complex sentences, into entire subject and entire predicate. For this purpose take sentences as they occur in the readers or other text-books. Find also base of subject and base of predicate. In this exercise deal only with the two great parts of the sentence, paying no attention to minor elements. Give six weeks to this work with the sentence as a whole.

Then take modifying or subordinate elements as wholes, showing that with every added element ideas are added to the bases. Give much practice with modifying elements as wholes before naming them or classifying them.

The study of the word element may now be begun.

The predicate may now be divided into two parts, the asserter and that which is asserted. Teach the latter as expressing time, condition, place, identity or action.

The work for this period is mainly the sentence as a whole and the subordinate elements as wholes.

The word element should be studied in detail.

(b) The sentence. Two parts, subject and predicate. Three parts, subject, asserter and part asserted. The asserter. Predicant; two time forms, present and past. Two forms in the present. Discover the use of each asserter studied, e. g., *will* asserts with the idea of futurity; *may*, of permission. Distinguish between the use of *have* as an asserter and as a predicant. Study modifying elements of the three classes.

5 B. PARTS OF SPEECH.

The pupils, though not yet taught the parts of speech in detail, should be able to recognize the noun, verb, adjective and adverb, using the words familiarly, in order to understand the meaning of adjective and adverbial modifiers in the sentence.

5 C. WORD ANALYSIS.

Word analysis should not be limited to word work in the speller, but attention should be called constantly to variations in word forms wherever found. Let the expressions *prefix*, *root*, *suffix*, *syllable*, *synonym*, etc., be in familiar use.

Study the effect of prefixes and suffixes on the meanings of words.

5 D. COMPOSITIONS.

In order to give definiteness and purpose to the composition teaching in the fifth grade, teachers are requested to devote the time from now to Christmas to training their pupils in three kinds of composition, description, reproduction of narrations and original narrations. Several compositions in each class, in order named, should be written. Accompanying each class appropriate instruction should be given. During the week preceding Christmas, compositions will be called for by the supervising principal, the subjects and conditions of which will be announced in due time.

Write paragraphs daily, generally as seat work.

Subjects:

- (a) The flower and bird work.
- (b) Physiology.
- (c) The sentence and its parts.
- (d) Reproductions of poems.
- (e) Accounts of outings.
- (f) History work.

5E. WORK IN NUMBER TILL CHRISTMAS.

Review:

Writing numbers:

Arabic notation to billions.

Roman notation to thousands.

Abstract work:

Unite and separate *large* numbers correctly.

Use paper models based on the first thirteen charts in Giffin's arithmetic. Each pupil should have his own model.

Beginning November 15:

Fractions with small denominators orally, and in every way inject the objective method into teaching. Use 3-inch cubes and fractional parts to sixty-fourths. Use the books, furniture, etc., of the schoolroom.

Change fractions in the denominators.

Reduce small mixed numbers to improper fractions and *vice versa*.

Teach the four operations with *easy*, simple fractions and mixed numbers.

Find parts of whole numbers and whole numbers from parts.

Develop definitions of all important terms and processes.

Make simple and complex statements of every problem worked.

Give numerous problems and expect and require the children to work them.

Have problems made from specifications.

5F. WORK IN NUMBER TO APRIL 1.

Four processes applied to fractional, denominate and abstract numbers. Factoring, L. C. M. Percentage, first case by 1 per cent. method.

Linear measure, inch to mile; square measure, square inch to square rod; cubic measure, cubic inch to cubic yard; squares 1 to 144, 225, 400, 625, and their roots; cubes 1 to 1728 and their cube roots.

Denominate work: Reduction, ascending and descending; multiply and divide by $5\frac{1}{2}$, $16\frac{1}{2}$, etc.

Giffin: part 1, charts 8, 9, 10; part 2, area, pages 5 to 13; part 3, volume, pages 5 to 9.

NOTE.—In connection with all this work do much measuring, comparing, and estimating.

5G. GEOGRAPHY.

(a) Follow the outline in the course of study. Finish globe work and begin North America.

1. Relief, contour, etc. By use of sand maps and the relief maps in the geographies, make a thorough study of the facts of the surface and outline of North America. Spend no more than two weeks on this work.

2. Political divisions. From the study of the political maps, locate the political divisions of North America.

3. United States—location, physical features, climate. (The work noted under 1 of this outline should prepare pupils to see these facts concerning the United States.)

4. Group and study states in accordance with physical, climatic and industrial resemblances. Study physical and political maps closely. Locate the great centers of industry and trade. Fix several transcontinental railroad routes.

5. Finish *Our Own Country and Our American Neighbors*. Read related text of all the geographies. Consult maps constantly in connection with this reading. Try to finish this work in four weeks.

6. Other political divisions. Finish the other political divisions (according to same plan) in two weeks.

At all times cultivate the habit of locating places that are referred to in any of the studies of the grade.

(b) Globe lessons, and in connection therewith develop and read first 22 pages of Redway's *Elementary geography*, with corresponding matter in Frye's *Primary geography*. Begin North America while studying Columbus and finish by Easter.

5 H. HISTORY.

(a) Unit in the Normal fourth reader. Locate all the places named therein and relate them to one another.

Teach the subject by topics and unite all the topics from time to time so as to form a connected narrative.

(b) Continue reading, discussion, and geography of *Two Inaugurations* till January 14, and finish history in fourth reader by Easter.

5 I. BONES.

The study of bones naturally falls under three heads: (1) Appearance, form and structure; (2) uses; (3) hygiene or care and preservation.

1. Bones of various shapes and kinds should be seen and examined by the pupils—human bones, if possible. The entire human skeleton is desirable for exhibition. Perform experiments to show composition of bones (mineral and animal matter). Make sections—cross and longitudinal—to show structure, calling attention to periosteum, marrow, to what parts are solid, hollow, cellular, etc. Study cartilage, ligaments and the different kinds of joints. Follow directions for objective work given in course of study.

Develop that bones have life, growth, change and decay; that they are fed and strengthened in health and are reduced in strength and weight by disease, as the muscles and other tissues are.

2. Develop uses of bones; framework for the body; for protection of delicate parts (three cavities); levers for producing motion, etc. Have pupils name, locate, and tell uses of more important bones in the body.

3. Hygiene, correct forms, as: deformity; free, unrestrained growth and development of bones; e. g., ribs and feet; importance of correct posture in children, because of greater flexibility of bones. Use the text-book.

Teachers can broaden the scope and increase the interest and value of their work by consulting larger text-books on the subject.

6 A. SYLLABUS OF SIXTH-GRADE LANGUAGE.

(a) Finish *Evangeline* by Christmas.

Emphasize the work of securing good English in oral and written composition.

Analysis of the sentence, and all kinds of elements.

Under adjective clauses give examples of relative pronouns, in all their uses. Correlate parts of speech.

Review homonyms assigned to previous grade.

Study complex and compound elements. Expand word and phrase elements and contract clause and phrase elements. Examine structure of compound elements to see whether the parts united are in harmony. Make use of this work in teaching composition.

(b) Complete analysis of the sentence; parts of speech, discuss and recognize incidentally to other work; word work in Merrill's speller.

Composition.—Daily write upon some subject developed in the several studies of the grade.

6B. ARITHMETIC.

Giffin: part 1, charts 8, 9, 10, 11, 12, 13; part 2, area, pages 5 to 13; part 3, volume, pages 5 to 9; and other work in area and volume as teacher may select.

Have pupils measure, estimate and compare all the lengths, areas and volumes in and around the schoolroom, making the data thus obtained the basis for practice in all the processes and all the tables of measures. Use books only to give additional work in principles and applications involved. Use these experiences also for language teaching in oral and written composition.

Cover all the sixth-grade work by Easter. Cause pupils to be able to find the square and cube of any number, and to know the numbers 1 to 12, 15 and 20 as square and cube roots. Along with this work give simple percentage drill and applications.

6C. SIXTH-GRADE GEOGRAPHY.

Eurasia.—Surface: See physical maps in Frye and Redway. Locate axes. Distinguish the several ranges. Drainage: Slopes, river basins, river systems, etc. Contour: Coast lines, etc.

Europe.—Study political divisions (important countries in detail).

Asia.—Political divisions—China, India, Japan—in detail.

Africa.—As a whole: Physical features, drainage systems, outlines, etc.; foreign interests in Africa; Cecil Rhodes's projects; Kitchener, etc.

Australia and isles of the sea.—Australia, Philippines, Hawaiian islands, Samoa, West Indies.

NOTES.—Trace several transoceanic routes of travel and commerce. Follow route from New York to Hawaii, Manila, Habana, Samoa. Notice modes of travel, distances, cost, etc.

Make constant practice of locating definitely and relatively all places noted in schoolroom work. Do not waste time in unrelated details.

Time given, the rest of the year. The following suggestion of apportionment is offered: Eurasia, including Europe and Asia, six weeks; Africa and Australia, two weeks; isles of the sea, two weeks. Let the study of routes of travel be carried on concurrently with the other work.

In connection with the above read all the text of the several geographies, the geographical readers, and such other related matter as is obtainable.

6D. SIXTH GRADE HISTORY.

(a) 1. Make the child appreciate what the condition of this continent was before the discovery, physically and otherwise.

2. In a similar way discuss the condition of the old world at that time. Barnes, p. 41.

Give careful and constant attention to the geography of history.

Train pupils to read for the purpose of making an outline. Give topic, Discoveries, for instance. Commit poems, national hymns, speeches, a few dates; group warriors, statesmen, inventors, etc.; connect actions with actors.

(b) Teach history topically, having in mind the value of each topic relative to the subject as a whole. Avoid wasting strength upon details. Unite the leading topics so as to form a continuous view of the course of events as a whole.

At the proper place begin Miles Standish.

7 A. SYLLABUS:

I. Matter and its properties:

- (a) Impenetrability.
- (b) Divisibility of matter—molecule.
- (c) Porosity.
- (d) Density.
- (e) Phenomena of attraction:
 - 1. Gravity—
 - Effects of gravity—
 - (a) In liquids: (1) pressure; (2) buoyant; force of liquids; (3) floating bodies.
 - (b) In atmosphere: pressure; barometer; pump.
 - 2. Cohesion.
 - 3. Adhesion; capillary attraction.

II. Heat:

- (a) Sources of heat; ways of producing heat:
 - 1. By mechanical force.
 - 2. By chemical force.
- (b) Effects of heat in matter:
 - 1. Expansion and attraction: solids, liquids, and gases; the thermometer.
 - 2. Change of state: (1) liquefaction and solidification; (2) vaporization and liquefaction.
- (c) Communication of heat:
 - 1. Conduction: solids.
 - 2. Convection: liquids and gases.
 - 3. Radiation.

III. Sound:

- (a) Nature of sound: vibrations.
- (b) Transmission of sound: solids, liquids and gases.

8 A. LITERATURE.

The course of reading in American and English literature noted below is recommended for use in the eighth-grade schools. It is suggested that all the selections from one author be read before taking those of another. A short study of the life of the author should follow the reading of the pieces indicated. Use the Normal fifth reader.

American authors.

Bryant	The Death of the Flowers.
	The Fringed Gentian.
	Lines to a Water-Fowl.
	The Constitution.
	The Antiquity of Freedom.
Holmes	The Living Temple.
	The Last Leaf.
Irving	A Bee-Hunt.
	The Bobolink.
	Traits of Indian Character.
Longfellow	Children.
	Flower-De-Luce.
	Walter Von Der Vogelweild.
	The Two Angels.
Saxe	The Cold-Water Man.
Sprague	The Fate of the Indians.
Willis	A Child Tired of Play.

English authors.

Goldsmith.....	The Deserted Village (extract). The Village Preacher.
Gray.....	An Elegy.
Tennyson.....	The Brook.
Wordsworth.....	The Daffodils.

Tabular statements concerning the graded schools, by divisions:

FIRST DIVISION.

TABLE I.—*Showing location of buildings, and distribution of schools by buildings.*

School and location.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Kindergarten.	Total.	Schoolrooms.	Number of teachers.
Franklin, 13th and K nw.....	2	1	1	1	2	2	2	2	.....	a13	b15	9
Dennison, S street nw., between 13th and 14th.	2	1	1	1	1	1	1	1	1	10	c12	10
Force, Massachusetts avenue, between 17th and 18th nw.....	2	2	2	2	1	1½	1½	1	.....	13	d12	13
Adams, R street, between 17th and 18th nw....	1	1	1	1	1	1	2	1	.....	9	8	9
Berret, 14th and Q nw.....	1	1	1	1	1	1	1	1	.....	8	9	8
Harrison, 13th street, between V and W streets nw.....	.....	1	1	1	1	1	1	1	.....	7	8	7
Phelps, Vermont avenue, between T and U streets nw.....	1	1	1	1	1	1	1	1	.....	8	8	8
Thomson, 12th street, between K and L streets nw.....	.....	1	1	1	.....	.....	.....	.....	.....	3	e6	3
Whole number of schools:												
1899.....	9	9	9	9	8	8½	9½	8	1	71	78	67
1898.....	9	9	9	9	8	8	9	10	1	71	78	68

a Eight practice schools under supervision of five normal teachers.

b Two rooms used by normal school.

c One room used for cooking and one room for cutting.

d One room used for cooking school.

e One room used for cooking school and two rooms for manual training.

TABLE II.—*Showing condition of buildings.*

Building.	How heated.	Light.	Ventilation.	Water-closets.	Play rooms.	Yards.	Owned or rented.
Franklin.....	Steam.....	Excellent.	Good.....	Good.....	Excellent.	Small.....	Owned.
Thomson.....	Furnace.....	Good.....	Fair.....	do.....	Fair.....	do.....	do.
Adams.....	do.....	Excellent.	Excellent.	Excellent.	Excellent.	Fair.....	do.
Dennison.....	Steam.....	do.....	do.....	Good.....	do.....	Excellent.	do.
Force.....	do.....	do.....	Good.....	do.....	do.....	Fair.....	do.
Harrison.....	Furnace.....	do.....	Excellent.	Excellent.	do.....	do.....	do.
Phelps.....	do.....	do.....	do.....	do.....	Fair.....	do.....	do.
Berret.....	do.....	Good.....	do.....	do.....	do.....	Small.....	do.

TABLE III.—*Showing half-day schools.*

School.	Half-day schools.		Grades of half-day schools, 1898.
	1899.	1898.	
Force	2	2	1, 2
Adams	2	.....	2, 2
Total	4	2	.....

TABLE IV.—*Showing distribution of pupils by grades, attendance and average number per teacher.*

Grade.	Number of schools.		Whole enrollment.		Average enrollment.		Average daily attendance.		Average number of pupils per teacher.	
	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.	Based on whole enrollment.	Based on average enrollment.
Eighth	9	9	418	424	347	354	321	331	45.3	38.5
Seventh	9	9	392	407	322	342	297	319	43.5	33.0
Sixth	9	8½	416	384	330	324	310	302	46.2	34.4
Fifth	9	9	447	442	360	362	326	336	49.6	36.2
Fourth	8	8½	400	443	330	367	302	337	50.0	37.7
Third	8½	8	378	382	302	309	273	285	47.2	34.1
Second	9½	8½	410	414	334	314	300	300	45.5	33.3
First	8	10½	464	529	303	365	268	332	58.0	33.5
Kindergarten	1	.....	63	.....	33	.....	30	.....	63.0	30.0
Total	71	71	3,388	3,425	2,670	2,737	2,427	2,542	47.7	37.6

TABLE V.—*Showing percentage of attendance, cases of tardiness of pupils and absence and tardiness of teachers.*

Month.	Percentage of attendance.	Tardiness of teachers.	Cases of tardiness.		Substitute service.	
			1899.	1898.	1899.	1898.
September	97.2	0	119	132	19.0	22.0
October	94.6	7	405	487	20.0	36.5
November	93.6	16	560	564	56.5	14.5
December	91.0	14	556	569	34.5	17.0
January	89.9	26	703	645	115.5	53.5
February	83.7	23	686	629	105.0	44.5
March	88.6	16	568	560	146.0	47.5
April	92.0	8	452	574	75.5	79.0
May	90.5	15	671	490	64.5	101.0
June	91.0	8	376	339	49.0	14.5
Total .....	.....	133	5,096	4,969	685.5	430.0

TABLE VI.—*Showing the number of graduates from the Washington normal school, other normal schools, colleges, and nongraduates.*

Washington normal school	46
Other normal schools	4
Colleges	2
Nongraduates	15
Total	67

SECOND DIVISION.

TABLE I.—Showing location of buildings, and distribution of schools by buildings.

School and location.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Total.	Schoolrooms.	Number of teachers.
Abbot, corner 6th street and New York avenue..	1	1	1	1	1	1	1	1	8	9	
Seaton, I street, between 2d and 3d streets nw...	1	2	1	1	1	1	1	2	10	12	8
Twining, 3d street, between N and O streets nw...	1	1	1	1	1	1	1	1	8	8	10
Eckington, corner 1st and Quincy streets ne.....	1	1	1	1	1	1	1	2	9	8	8
Morse, R street, between 5th street and New Jersey avenue nw	1		1	2	1	1	2	2	10	8	9
Henry, P street, between 6th and 7th streets nw .	1	2	2	1	1	3	2		12	12	10
Polk, corner 7th and P streets nw.....	1	1	1	1	1			2	7	8	12
Webster, corner 10th and H streets nw	1	1	2	2	2	2	2	2	14	12	7
Whole number of schools:											
1899	8	9	10	10	9	10	10	12	78	77	78
1898	8	9	10	10	9	9	10	11	76	69	76

¹One room used for cooking school and one for kindergarten.

TABLE II.—Showing condition of buildings.

Buildings.	How heated.	Light.	Ventilation.	Water-closets.	Play rooms.	Yards.	Owned or rented
Abbot.....	Furnace ..	Good	Fair	Good	None	None	Owned.
Seaton	Steam	Excellent.	Poor	Fair	Excellent.	Good	do.
Twining	Furnace ..	do	Good	do	Fair	do	do.
Eckington	do	do	do	Good	do	do	do.
Morse	do	do	do	Fair	do	do	do.
Henry.....	Steam	do	Poor	Good	do	do	do.
Polk	Furnace ..	do	Good	do	do	do	do.
Webster	Steam	do	Poor	do	do	None	do.

TABLE III.—Showing half-day schools.

Building.	Half-day schools.		Grades of half-day schools, 1899.	Number above second grade, 1899.
	1899.	1898.		
Abbot				
Seaton				
Twining		4		
Eckington.....	2		1, 1	
Morse.....	4	6	1, 1, 2, 2	
Henry		2		
Polk		2		
Webster.....	4	4	1, 1, 2, 2	
Total	10	18		

TABLE IV.—Showing distribution of pupils by grades, attendance, and average number per teacher.

Grade.	Number of schools.		Whole enrollment.		Average enrollment.		Average daily attendance.		Average number of pupils per teacher.	
	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.	Based on whole enrollment.	Based on average enrollment.
Eighth	8	8	297	317	239	267	227	252	37.1	29.9
Seventh	9	9	427	387	374	325	347	307	47.4	41.6
Sixth	10	10	441	494	391	430	365	401	44.1	39.1
Fifth	10	10	452	488	401	416	370	389	45.2	40.1
Fourth	9	9	456	427	397	364	373	337	50.7	44.1
Third	10	9	463	457	398	396	369	371	46.3	39.8
Second	10	10	520	441	438	379	403	353	52.0	43.8
First	12	11	596	581	427	444	379	403	50.0	35.6
Total	78	76	3,652	3,592	3,065	3,021	2,833	2,813	46.8	39.3

TABLE V.—Showing percentage of attendance, cases of tardiness of pupils, and absence and tardiness of teachers.

Month.	Percentage of attendance.	Tardiness of teachers.	Cases of tardiness.		Substitute service.	
	1899.	1899.	1899.	1898.	1899.	1898.
September	97.2	3	64	61	17.0	8.0
October	95.7	6	260	307	59.5	26.5
November	94.6	5	392	346	64.0	18.0
December	92.8	14	365	331	57.0	31.5
January	91.3	15	443	441	83.0	14.0
February	85.5	21	329	366	54.0	60.0
March	90.1	12	362	389	65.5	49.0
April	94.0	13	201	350	30.5	58.5
May	92.1	28	357	347	62.0	45.0
June	93.6	15	188	225	34.0	18.0
Total		132	2,961	3,163	526.5	328.5

TABLE VI.—Showing the number of graduates from the Washington normal school, other normal schools, colleges, and nongraduates.

Washington normal school	61
Other normal schools	4
Colleges	1
Nongraduates	12
Total	78

THIRD DIVISION.

TABLE I.—Showing location of buildings, and distribution of schools by buildings.

School and location.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Kindergarten.	Total.	Schoolrooms.	Number of teachers.
Peabody, 5th and C streets ne	1	1	2	2	2	2	1	1	1	13	12	13
Hilton, 6th, between B and C streets ne	1	1	1	1	1	1	1	1	...	8	8	8
Carbery, 5th, between D and E streets ne	1	1	1	1	1	1	2	2	...	10	8	10
Maury, B, between 12th and 13th streets ne ..	1	1	1	1	2	a 2	1	2	...	11	8	11
Towers, 8th and C streets se	1	1	1	1	1	1	1	3	...	10	8	10
Wallach, D street, between 7th and 8th se...	1	2	3	3	2	a 2	1	...	...	14	b 14	14
Brent, 3d and D streets se	1	1	1	1	2	a 2	1	2	...	11	8	11
Lenox, 5th, between G and Virginia ave. se..	1	1	1	2	1	a 2	1	2	...	11	8	11
McCormick, 3d, between M and N se .....	...	...	...	...	1	a 2	1	2	...	6	4	6
Total number of schools:												
1899.....	8	9	11	12	13	15	10	15	1	94	78	94
1898.....	8	9	11	12	12	15	11	15	...	93	70	93

a One combined second and third grade.

b One room used as cooking school.

TABLE II.—Showing condition of buildings.

Building.	How heated.	Light.	Ventilation.	Water-closets.	Play rooms.	Yards.	Owned or rented.
Peabody	Steam	Excellent.	Excellent.	Excellent.	Fair	Small.....	Owned.
Hilton	Furnace	do	do	do	do	do	do.
Carbery (a)	do	do	Good	do	do	do	do.
Maury	do	do	Fair	Poor	Excellent.	Fair	do.
Towers (a)	do	do	Good	Excellent.	Fair	Ample.....	do.
Wallach	Steam	do	do	Fair	Good	do	do.
Brent	Furnace	do	Poor	Poor	Excellent.	Small.....	do.
Lenox.....	do	do	Good	Excellent.	Good	do	do.
McCormick	do	do	Poor	Fair	None	Ample.....	do.

a In Carbery and Towers boys' play rooms are used as coal vaults.

TABLE III.—Showing half-day schools.

School.	Half-day schools.		Grades of half-day schools.	Number above second grade.	
	1899.	1898.		1899.	1898.
Peabody	2	6	K., 1, 2.	.....	2
Hilton.....	2	.....	1, 2.	.....	.....
Carbery	4	4	1, 1, 2, 2.	.....	.....
Maury	6	6	1, 1, 2, 3, 3, 4.	3	2
Towers.....	4	4	1, 1, 1, 2.	.....	.....
Wallach.....	2	2	2, 3.	1	1
Brent	8	6	1, 1, 2, 3, 3, 4.	3	3
Lenox.....	6	6	1, 1, 2, 3, 3, 4.	3	3
McCormick	4	4	1, 1, 2, 3.	1	1
Total.....	36	38	.....	11	12

TABLE IV.—Showing distribution of pupils by grades, attendance, and average number per teacher.

Grade.	Number of schools.		Whole enrollment.		Average enrollment.		Average daily attendance.		Average number of pupils per teacher.	
	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.
Eighth	8	8	358	397	304	338	288	321	44.7	38.0
Seventh	9	9	442	410	384	363	363	345	49.0	42.6
Sixth	11	11	539	548	481	478	437	453	49.0	43.7
Fifth	12	12	599	533	519	524	477	490	40.9	43.2
Fourth	13	12	609	614	516	552	504	520	46.8	42.0
Third	15	13	759	723	619	651	603	611	50.6	43.2
Second	10	11	478	504	420	444	385	415	47.8	42.0
First	15	15	743	811	556	622	512	572	49.5	37.0
Kindergarten	1	.....	50	.....	41	.....	36	.....	50.0	41.0
Total	94	93	4,577	4,602	3,900	3,975	3,605	3,727	.....	.....

TABLE V.—Showing percentage in attendance, cases of tardiness of pupils, and absence and tardiness of teachers.

Month.	Percentage of attendance.	Tardiness of teachers.	Cases of tardiness.		Substitute service.	
			1899.	1898.	1899.	1898.
September	97.7	1	36	43	13.0	2.5
October	95.7	6	161	209	57.5	70.5
November	94.7	8	170	196	78.5	50.5
December	92.9	18	203	183	74.0	69.0
January	90.9	17	222	233	83.5	92.5
February	85.9	20	113	212	64.0	51.5
March	90.3	15	175	191	84.0	83.0
April	93.9	5	102	206	62.0	63.5
May	92.1	8	166	158	17.5	65.0
June	94.4	10	82	96	7.5	45.5
Total .....	.....	108	1,436	1,727	541.5	593.5

TABLE VI.—Showing the number of graduates from the Washington normal school, other normal schools, colleges, and nongraduates.

Washington normal school	73
Other normal schools	1
Colleges	0
Nongraduates	20
Total	94

FOURTH DIVISION.

TABLE I.—*Showing location of buildings, and distribution of schools by buildings.*

School and location.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Total.	Schoolrooms.	Number of teachers.
Jefferson, 6th and D streets sw.....	2	2	3	3	2	2	2	2	18	19	18
Amidon, 6th and F streets sw.....			1	1	1	1	2	2	8	8	8
Bradley, 13½ street, between C and D streets sw....	1	1	1	1	1	1	1	2	9	8	9
Smallwood, I street, between 3d and 4½ streets sw..	1	1	1	1	2	2	1	1	10	8	10
Greenleaf, 4½ street, between M and N streets sw...		1	1	1	1	1	3	4	12	8	12
Potomac, 12th st., between Md. ave. and E st. sw...					1	1	1	1	4	4	4
Total number of schools:											
1899	4	5	7	7	8	8	10	12	61	55	61
1898	4	5	7	7	8	8	10	12	61	54	61

TABLE II.—*Showing condition of buildings.*

Building.	How heated.	Light.	Ventilation.	Water-closets.	Play rooms.	Yards.	Owned or rented.
Jefferson.....	Steam	Excellent.	Fair	Excellent.	Excellent.	Excellent.	Owned.
Amidon.....	Furnace	do	Excellent.	do	do	Small	do.
Bradley.....	do	do	do	Fair	Small	do	do.
Smallwood.....	do	do	do	do	do	do	do.
Greenleaf.....	do	do	do	Excellent.	do	do	do.
Potomac.....	Stoves.....	do	Fair	Poor.....	None	do	do.

TABLE III.—*Showing half-day schools.*

School.	Half-day schools.		Grades of half-day schools.
	1899.	1898.	
Jefferson.....			
Amidon.....	2		1, 1
Bradley.....	2	2	1, 1
Smallwood.....	4	4	1, 2, 3, 3
Greenleaf.....	8	8	1, 1, 1, 1, 2, 2, 2, 3
Potomac.....			
Total.....	16	14	

TABLE IV.—Showing distribution of pupils by grades, attendance, and average per teacher.

Grade.	Number of schools.		Whole enrollment.		Average enrollment.		Average daily attendance.		Average number of pupils per teacher.	
	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.	Based on whole enrollment.	Based on average enrollment.
Eighth	4	4	205	195	171.0	166	160.5	157	51.2	42.7
Seventh	5	5	239	197	194.0	174	180.0	163	47.8	38.8
Sixth	7	7	312	329	262.0	273	241.0	256	44.5	37.4
Fifth	7	7	350	343	296.0	309	272.0	286	50.0	42.2
Fourth	8	8	387	374	343.2	332	319.6	307	48.3	42.9
Third	8	8	445	411	402.1	372	369.0	347	55.6	50.2
Second	10	10	461	484	391.9	424	357.9	393	46.1	39.1
First	12	12	630	633	483.0	495	439.0	454	52.5	40.2
Total	61	61	3,029	2,966	2,543.2	2,545	2,339.0	2,363	49.5	41.6

TABLE V.—Showing percentage of attendance, cases of tardiness of pupils, and absence and tardiness of teachers.

Month.	Percentage of attendance.	Tardiness of teachers.	Cases of tardiness.		Substitute service.	
			1899.	1898.	1899.	1898.
September	96.8	1	60	38	3.5	2.0
October	94.9	8	184	180	13.5	23.0
November	93.9	12	235	212	19.5	16.5
December	92.2	11	230	169	23.5	31.5
January	91.7	11	258	268	81.0	16.5
February	84.4	16	203	233	61.5	28.0
March	89.8	16	223	186	36.0	37.0
April	92.9	5	178	212	13.0	18.5
May	91.6	12	195	199	35.0	52.5
June	93.4	5	111	109	23.0	26.0
Total		97	1,877	1,806	309.5	215.5

TABLE VI.—Showing the number of graduates from the Washington normal school, other normal schools, colleges, and nongraduates.

Washington normal school	34
Other normal schools	10
Colleges	1
Nongraduates	16
Total	61

FIFTH DIVISION.

TABLE I.—*Showing location of buildings, and distribution of schools by buildings.*

Name and location.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Kindergarten.	Total.	Rooms.	Number of teachers.
Jackson, U, between 30th and 31st streets.....	1	1	1	1	1	1	1	1	.....	8	8	8
Grant, G, between 22d and 23d streets.....	1	1	1	1	1	1	2	2	.....	10	10	10
Curtis, O street near 32d.....	1	1	1	1	1	1	1	1	.....	8	8	8
Addison, P street near 32d.....	1	.....	1	1	1	1	1	1	1	8	8	8
Fillmore, 35th street near U.....	1	1	1	1	1	1	1	1	.....	8	8	8
Weightman, 23d and M streets.....	1	1	1	1	1	1	1	2	.....	9	8	9
Corcoran, 28th street near M.....	.....	1	1	1	1	1	2	2	.....	9	8	9
Threlkeld, 36th street and Prospect avenue.....	.....	.....	.....	1	1	1	1	1	.....	5	4	5
High Street, 32d and S streets.....	.....	.....	.....	.....	1	1	1	1	.....	4	4	4
Industrial Home, Wisconsin avenue.....	.....	.....	<i>a</i> 1	.....	.....	.....	.....	<i>b</i> 1	.....	2	2	2
Toner, 24th and F streets.....	1	1	1	1	1	1	1	1	.....	8	8	8
Whole number of schools:												
1899.....	7	7	9	9	10	10	12	14	1	79	76	79
1898.....	7	6	8	10	10	10	11	14	.....	76	70	76

a Composed of grades 3 to 6.*b* Composed of grades 1 and 2.TABLE II.—*Showing condition of buildings.*

Building.	How heated.	Light.	Ventilation.	Water-closets.	Play-rooms.	Yards.	Owned or rented.
Jackson.....	Furnace ..	Excellent.	Excellent.	Excellent.	Excellent.	Good	Owned.
Grant.....	Steam	do	do	do	do	do	do.
Addison.....	Furnace	do	do	Good	do	do	do.
Weightman.....	do	do	do	Excellent.	do	do	do.
Corcoran.....	do	do	do	do	do	do	do.
Fillmore.....	do	do	do	do	do	do	do.
Toner.....	do	do	do	do	do	do	do.
Threlkeld.....	Stoves	do	Fair	Fair	Poor.....	Fair	do.
High Street.....	do	do	Poor.....	Poor.....	do	do	do.
Industrial Home.	Steam	do	Fair	Good	do	Excellent.	do.

TABLE III.—*Showing half-day schools.*

Name of school.	Half-day schools.		Grade of half-day school.
	1899.	1898.	
Grant.....	.....	6	1, 2
Weightman.....	2	4	1, 2
Corcoran.....	2	.....	1
Threlkeld.....	2	.....	1, 2
Addison.....	.....	2	1, 2
Total.....	6	12	.....

TABLE IV.—Showing the distribution of pupils by grades and the average number per teacher.

Grade.	Number of schools.		Whole enrollment.		Average enrollment.		Average daily attendance.		Average number per teacher.	
	1899.	1898.	1899.	1898.	1899.	1898.	1899	1898.	Based on whole enrollment.	Based on average enrollment.
Eighth	7	7	258	311	218	236.3	202	221.2	36.8	31.0
Seventh	7	6	285	282	235	242.3	216	225.6	40.7	34.0
Sixth	9	8	423	343	335	293.8	311	273.6	47.0	37.2
Fifth	9	10	386	444	329	407.6	306	385.3	42.8	36.4
Fourth	10	10	425	431	353	372.5	321	348.1	42.5	35.3
Third	10	10	438	386	375	329.9	343	306.0	43.8	37.5
Second	12	11	491	469	398	414.5	362	380.7	40.9	33.0
First	14	14	670	692	465	519.8	435	473.8	47.8	33.2
Kindergarten	1	—	64	—	34	—	31	—	64.0	34.0
Total	79	76	3,140	3,358	2,742	2,821.7	2,527	2,614.3	43.5	34.7

TABLE V.—Showing percentage of attendance, cases of tardiness of pupils, and absence and tardiness of teachers.

Month.	Percentage of attendance.	Tardiness of teachers.	Cases of tardiness.		Substitute service.	
			1899.	1898.	1899.	1898.
September	97.3	0	64	119	18.0	1.0
October	93.8	11	384	422	24.0	17.0
November	95.2	17	477	535	52.5	34.0
December	92.4	8	424	522	59.5	18.5
January	91.1	22	578	523	81.0	67.0
February	82.3	30	458	480	52.5	72.0
March	89.6	18	453	513	60.5	42.0
April	92.4	5	275	466	11.0	36.5
May	90.6	14	596	501	39.5	44.0
June	92.9	13	306	265	48.0	28.5
Total		138	4,012	4,346	446.5	360.5

TABLE VI.—Showing the number of graduates from the Washington normal school, other normal schools, colleges, and nongraduates.

Washington normal school	54
Other normal schools	1
Colleges	3
Nongraduates	21
Total	79

SIXTH DIVISION.

TABLE I.—Showing location of buildings, and distribution of schools by buildings.

School and location.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Kindergarten.	Total.	Schoolrooms.	Number of teachers.
Gales, 1st and G streets nw	1	1	2	2	2	2	2	2		14	^a 12	14
Arthur, Arthur place nw	1	1	1	1	1	1	2	2		10	8	10
Blake, North Capitol street between K and L streets nw	1	1	1	1	1	2	2	2		11	8	11
Hayes, 5th and K streets ne	1	1	1	1	1	1	2	2		10	8	10
Blair, I street between 6th and 7th streets ne	1	1	2	1	1	1	1	1		9	8	9
Blair annex, 8th and I streets ne				1						1	1	1
Taylor, 7th street near G street ne	1	1	1	1	1	2	2	2		11	8	11
Taylor annex, 8th street between F and G streets ne					1					1	1	1
Madison, 10th and G streets ne		1	1	1	2	2	2	2		11	8	11
Pierce, G and 14th streets ne	1	1	1	1	2		3	3		12	8	12
Pierce annex, Maryland avenue near 14th street ne						2				2	1	2
Hamilton, Bladensburg road, county	5-8				3-4		1	1		4	4	4
Langdon, Langdon, D. C		4-7				1-3				2	2	2
1201 Maryland avenue ne									1	1	1	1
Whole number of schools:												
1899	8	9	10	10	13	14	17	17	1	99	76	99
1898	8	9	10	10	11	14	14	17	0	93	76	93

^a Including one used for manual training.

TABLE II.—Showing condition of buildings.

Building.	How heated.	Light.	Ventilation.	Water-closets.	Play rooms.	Yards.	Owned or rented.
Gales	Steam	Excellent	Good	Excellent	Fair	Parking	Owned
Arthur	Furnace	do	Excellent	do	Excellent	Ample	do.
Blake	do	do	Good	do	do	do	do.
Hayes	do	do	Excellent	do	do	Boys', ample; girls', small.	do.
Blair	do	do	do	do	do	do	do.
Blair annex	Stoves	Fair	Poor	Fair	None	None	Rented.
Taylor	Furnace	Excellent	Excellent	Excellent	Excellent	Ample	Owned.
Taylor annex	Stoves	Fair	Poor	Fair	None	Excellent	Rented.
Madison	Furnace	Excellent	Excellent	Excellent	Excellent	Small	Owned.
Pierce	do	do	do	do	do	Girls', ample; boys', small.	do.
Pierce annex	Stoves	Good	Poor	Poor	None	Small	Rented.
Hamilton	do	Fair	Fair	Privies	do	Ample	Owned.
Langdon	do	Excellent	Good	do	Fair	do	do.
1201 Maryland avenue ne	Furnace	Good	Fair	Fair	None	Parking	Rented.

TABLE III.—Showing half-day schools.

School.	Half-day schools.		Grade of half-day schools.	Number above second grade.	
	1899.	1898.		1899.	1898.
Gales.....	6	4	1, 2, 3	2	.....
Arthur.....	4	2	1, 2	.....	.....
Blake.....	6	4	1, 2, 3	2	.....
Hayes.....	4	2	1, 2	.....	.....
Blair.....	2	2	1, 2	.....	.....
Blair annex.....	6	6	1, 2, 3	2	2
Taylor.....	6	6	1, 2, 3	2	2
Taylor annex.....	8	6	1, 2, 4	2	1
Madison.....	2	2	3	2	2
Pierce.....	.....	.....	.....	.....	.....
Pierce annex.....	.....	.....	.....	.....	.....
Hamilton.....	.....	.....	.....	.....	.....
Langdon.....	.....	.....	.....	.....	.....
1201 Maryland avenue ne.....	.....	.....	.....	.....	.....
Total.....	44	34	.....	12	7

TABLE IV.—Showing distribution of pupils by grade, attendance, and average number per teacher.

Grade.	Number of schools.		Whole enrollment.		Average enrollment.		Average daily attendance.		Average number of pupils per teacher.	
	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.	Based on whole enrollment.	Based on average enrollment.
Eighth.....	7	7	334	390	275	284	229	270	47.7	39.2
Seventh.....	8	8	379	363	317	307	298	289	47.3	39.6
Sixth.....	10	10	424	460	363	401	330	374	42.4	36.3
Fifth.....	10	10	467	474	398	400	366	373	46.7	39.8
Fourth.....	12	10	599	488	482	422	443	393	49.9	40.1
Third.....	13	12	608	608	498	521	451	472	46.6	38.3
Second.....	16	14	660	597	543	510	495	465	41.2	33.9
First.....	16	16	843	853	604	624	536	562	52.6	37.7
Total.....	92	87	4,312	4,242	3,480	3,469	3,148	3,198	46.8	37.8
County schools.....	6	6	260	226	180	174	158	154	43.3	30.0
Kindergarten.....	1	.....	63	.....	37	.....	31	.....	63.0	37.0
Grand total..	99	93	4,635	4,468	3,697	3,643	3,337	3,352	46.8	37.3

TABLE V.—Showing percentage of attendance, cases of tardiness of pupils, and absence and tardiness of teachers.

Month.	Percentage of attendance.	Tardiness of teachers.	Cases of tardiness.		Substitute service.	
			1899.	1898.	1899.	1898.
September.....	96.9	1	96	61	17.0	8.0
October.....	94.2	10	535	307	52.5	26.5
November.....	93.5	20	439	346	44.0	18.0
December.....	91.9	19	451	331	58.5	31.5
January.....	90.8	15	454	441	73.5	14.0
February.....	84.8	22	395	366	57.0	60.0
March.....	83.6	20	308	389	25.5	49.0
April.....	91.7	10	268	350	9.0	58.5
May.....	90.7	15	434	347	24.5	45.0
June.....	90.6	12	279	225	28.0	10.0
Total.....	.....	144	3,659	3,163	381.5	328.5

TABLE VI.—Showing the number of graduates from the Washington normal school, other normal schools, colleges, kindergartens, and nongraduates.

Washington normal school.....	81
Other normal schools	6
Colleges	0
Kindergartens	1
Nongraduates	11
Total.....	99

SEVENTH DIVISION.

TABLE I.—Showing location of buildings, and distribution of schools by buildings.

School and location.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Kindergarten.	Total.	Schoolrooms.	Number of teachers.
WHITE.												
Reservoir, near Conduit road.....		5-7				3-4	1-2			3	4	3
Conduit Road, near distributing reservoir.....							1-2			1	1	1
Tenley, Tenley, D. C.....	7-8		6-7	1	1	1	1	1		7	a 8	7
Chevy Chase, Chevy Chase, D. C.....				4-7			1-3			2	4	2
Brightwood, Brightwood, D. C.....	7-8	6-7			4-5	3-4	2-3	1		6	b 8	6
Johnson, Mount Pleasant, D. C.....	1	1	1	1	1	1	{ 1-2 1 }	1		9	8	9
Johnson annex, Mount Pleasant, D. C.....				5-6		3-4				2	4	2
Monroe, Stenben street nw., between Brightwood and Sherman avenues...	1	6-7	1		1	1	1	2	1	9	c 8	9
Woodburn, Blair and Riggs roads.....		6-8			4-5	2-3	1-2			4	4	4
Brookland, Brookland, D. C.....	7-8		5-6		4-5	1	{ 1-2 1 }	1		7	d 8	7
Whole number of schools:												
1899.....	5	5	4	4	6	8	11	6	1	50	57	50
1898.....	5	4	4	4	7	5	9	7		45	57	45
COLORED.												
Chain Bridge Road, near Conduit road, D. C.....					1-5					1	1	1
Grant Road, near Tenley, D. C.....		4-7				2-3		1		3	2	3
Military Road, near Brightwood, D. C.....			4-7			1-3				2	2	2
Wilson, Central avenue nw., between Erie and Superior streets.....	7-8	5-6			1	1	1	2	1	8	c 8	8
Orphans' Home, 8th street extended.....				3-5			1-2			2	2	2
Mott, 6th and Trumbull streets nw.....	7-8	6-7	1	1	{ 3-4 1 }		1	2		9	b 10	9
Bruce, Marshall street nw., between Brightwood and Sherman avenues.....					4-5	2-3		1	1	4	c 8	4
Fort Slocum, Blair road.....					1-5					1	1	1
Ivy City, Ivy City, D. C.....				3-6			1-2			2	2	2
Whole number of schools:												
1899.....	1	3	3	3	6	4	4	6	2	32	36	32
1898.....	1	3	3	3	4	5	5	6		30	28	30

a One room used for cooking school.

b One room used for manual training and one for cooking.

c One room occupied by kindergarten.

d One room used for manual training.

TABLE II.—*Showing condition of buildings.*

Building.	How heated.	Light.	Ventilation.	Water-closets.	Play rooms.	Yards.	Owned or rented.
Reservoir	Stoves	Good	Poor	Poor	Poor	Poor	Owned.
Conduit Road	do	Fair	do	do	None	do	do.
Chain Bridge	do	do	do	do	do	Good	do.
Road.	do	do	do	do	do	Excellent	do.
Tenley	Steam	do	do	Fair	Excellent	Fair	do.
Chevy Chase	Stoves	Good	do	Poor	None	Good	do.
Grant Road	do	Fair	do	do	do	Excellent	do.
Military Road	do	do	do	do	do	Fair	do.
Brightwood	Steam	Excellent	do	Fair	Excellent	Fair	do.
Johnson	Furnace	do	Fair	Good	do	do	do.
Johnson annex	Stoves	Fair	Poor	do	None	do	do.
Wilson	Furnace	Excellent	Fair	do	Excellent	Poor	do.
Orphans' Home	do	do	do	do	do	Good	(a)
Mott	Stoves	Fair ^b	Poor	Fair	None	Fair	Owned.
Monroe	Furnace	Excellent	Fair	Good	Excellent	do	do.
Bruce	do	do	Good	Excellent	do	Good	do.
Fort Slocum	Stoves	Fair	Poor	Poor	None	Excellent	do.
Woodburn	do	Excellent	Fair	Fair	Excellent	do	do.
Brookland	do	do	do	Good	Poor	Poor	do.
Ivy City	Steam	do	do	Good	Poor	do	do.
	Stoves	Good	Poor	Poor	None	do	do.

^a Neither owned nor rented.^b Except two rooms in which the light is poor.TABLE III.—*Showing half-day schools.*

School.	Half-day schools.		Grade of half-day schools.	Number above second grade.
	1897.	1898.		
Grant Road	2	2	1, 2, 3	4
Johnson	2	2	1, 2	
Monroe	2		1	
Mott	2	6	1	
Wilson		2		
Total		12		1

TABLE IV.—Showing distribution of pupils by grades, attendance, and average number per teacher.

Grade.	Number of schools.		Whole enrollment.		Average enrollment.		Average daily attendance.		Average number of pupils per teacher.	
	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.	Based on whole enrollment.	Based on average enrollment.
WHITE.										
Eighth	5	5	216	201	188.0	169.0	173.0	156.8	43.2	37.6
Seventh	5	3	218	127	177.0	108.8	160.0	98.1	43.6	35.4
Sixth	4	4	181	186	160.0	160.0	139.0	142.0	45.2	40.0
Fifth	4	4	175	179	149.0	139.0	134.0	126.0	43.7	37.2
Fourth	6	7	280	342	240.0	280.0	218.7	255.3	46.6	40.0
Third	8	5	365	215	301.7	178.7	273.4	165.2	45.6	37.7
Second	11	9	497	441	383.0	361.0	339.0	321.0	45.1	34.8
First	6	7	307	383	218.0	274.0	193.1	238.9	51.1	36.3
Kindergarten.....	1	.....	39	.....	26.0	.....	23.0	.....	39.0	26.0
Total <i>a</i>	50	44	2,278	2,074	1,842.7	1,670.5	1,653.2	1,503.3	45.5	36.8
COLORED.										
Eighth	1	1	53	42	42.0	30.0	38.0	27.0	53.0	42.0
Seventh	3	3	125	103	94.0	84.6	88.2	78.1	41.6	31.3
Sixth	3	3	133	114	111.8	85.0	103.7	79.6	44.3	37.2
Fifth	3	3	144	121	111.0	93.0	106.0	88.0	48.0	37.0
Fourth	6	4	297	218	209.6	161.1	192.5	149.2	49.5	34.9
Third	4	5	197	276	144.5	214.4	128.0	196.8	49.2	36.1
Second	4	5	188	253	155.0	196.8	140.0	185.7	47.0	38.7
First	6	6	333	349	218.8	216.0	198.8	197.0	55.5	36.4
Kindergarten.....	2	.....	74	.....	53.0	.....	49.0	.....	37.0	26.5
Total <i>b</i>	32	30	1,544	1,476	1,139.7	1,080.9	1,044.2	1,001.4	48.2	35.6
Grand total..	82	74	3,822	3,550	2,982.4	2,751.4	2,695.4	2,504.7	46.6	36.3

a Including 17 ungraded schools.*b* Including 25 ungraded schools.

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TABLE V.—Showing percentage of attendance, cases of tardiness of pupils, and absence and tardiness of teachers.

TABLE V.—

Month.	Percentage of attend- ance.	Tardiness of teach- ers.	Cases of tardi- ness.		Substitute service.	
			1899.	1898.	1899.	1898.
WHITE.						
September.....	97.2	3	51	80	6.5	2.5
October.....	94.2	3	243	187	6.0	10.0
November.....	92.7	14	289	227	14.0	27.0
December.....	90.5	14	289	265	10.5	14.5
January.....	88.8	12	297	359	22.0	19.0
February.....	77.0	13	151	281	31.0	60.0
March.....	88.6	4	247	230	18.0	18.5
April.....	92.4	5	154	224	26.0	13.0
May.....	89.0	4	253	247	22.0	5.5
June.....	90.9	7	155	156	3.0	6.0
Total.....		79	2,129	2,256	159.0	176.0
COLORED.						
September.....	97.0	5	23	2	3.0	.....
October.....	94.5	1	92	68	11.0	5.0
November.....	93.1	8	93	91	1.0	10.0
December.....	92.4	4	185	90	13.0	16.0
January.....	90.4	2	150	90	21.5	9.5
February.....	81.6	6	75	87	4.5	2.5
March.....	90.9	10	84	60	12.5	1.5
April.....	92.4	2	51	60	11.0	1.0
May.....	91.6	2	87	74	.5	8.5
June.....	94.2	1	36	33	15.0	1.0
Total.....		41	876	655	93.0	55.0
Grand total.....		120	3,005	2,911	252.0	231.0

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TABLE VI.—Showing number of graduates from Washington normal school, other normal schools, colleges, and nongraduates.

White:

Washington normal school	37
Other normal schools	5
Colleges	2
Nongraduates	7
Total	51

Colored:

Washington normal school (ninth, tenth, and eleventh divisions)	22
Other normal schools	7
Colleges	3
Nongraduates	0
Total	32

EIGHTH DIVISION.

TABLE I.—Showing location of buildings, and distribution of schools by buildings.

School and location.	Eighth grade.	Seventh grade.	Sixth grade.	Fifth grade.	Fourth grade.	Third grade.	Second grade.	First grade.	Kindergarten	Total.	Schoolrooms.	Number of teachers.
WHITE.												
Tyler, 11th street, between G and I se.....	1	1	1	1	1	2	2	2		11	8	11
Buchanan, Estreet, between 13th and 14th se		1	1	1	2	1	1	1	1	9	8	9
Cranch, 12th and G se.....				1	1	2	1	2		7	6	7
Benning, Benning, D. C		6-8		4-5		2-3		1		4	4	4
Congress Heights, Congress Heights, D. C		6-8		4-5		3	1	1		5	10	5
Good Hope, Good Hope, D. C.....			4-6			2-3		1		3	2	3
Van Buren, Anacostia, D. C	1		1	1	1	1	2	3		10	8	10
Van Buren annex, Anacostia, D. C		1	5, 6		1	1				4	6	4
Twining City, Twining City, D. C							1, 2			1	1	1
Anacostia Road, near Benning, D. C											b 1	
Whole number of schools:												
1899.....	2	5	5	6	6	10	8	11	1	54	54	54
1898.....	2	4	4	7	6	9	7	11		50	54	50
COLORED.												
Benning Road, near Benning, D. C		5-7					1, 2			2	2	2
Benning Road annex, near Benning, D. C					3-4					1	b 2	1
Birney, Howard avenue, Hillsdale D. C.....	1					2	2	2		7	4	7
Burrville, Burrville, D. C.....				4-6		1-3				2	2	2
Garfield, Garfield, D. C		5-7			3, 4	1	1	1		5	6	5
Hillsdale, Hillsdale, D. C.....		7	6	1	1			1		5	a 6	5
Whole number of schools:												
1899.....	1	3	1	2	3	4	4	4		22	22	22
1898.....	1	3		2	2	4	4	4		20	22	20

a Two rooms occupied as carpentry and cooking laboratories, respectively.

b One room occupied as carpentry shop and cooking laboratory jointly.

TABLE II.—Showing the condition of buildings.

Building.	How heated.	Light.	Ventilation.	Sanitariness.	Play rooms.	Yards.	Owned or rented.
Tyler	Furnace	Excellent.	Poor	Poor	Poor	Small	Owned.
Bachanan	do	do	do	Fair	do	do	do.
Cranch	Steam	Poor <i>a</i>	None	Poor	do	do	do.
Van Buren	Furnace	Excellent.	Poor	do	do	do	do.
Van Buren annex	Stoves	Fair <i>b</i>	None	None	None		do.
Birney	do	Excellent.	do	Very poor.	do	Good	do.
Hillsdale	do	Poor <i>c</i>	do	do	do	None	do.
Congress Heights	Furnace	Excellent.	do	do	Poor	Good	do.
Garfield	Stoves	Poor <i>d</i>	do	do	None	do	do.
Good Hope	do	Excellent.	Poor	do	do	Poor	do.
Twining City	do	Very poor.	None	do	do	None	Rented.
Benning Road	do	Excellent.	Poor	do	do	Poor	Owned.
Benning Road annex	do	Very poor.	None	do	do		do.
Benning	do	Excellent.	Poor	do	do	Good	do.
Burrville	do	Poor	Fair	do	do	Poor	do.
Anacostia Road	do	do	None	do	do	Good	do.

a Except two third-floor rooms, where the light is very poor.

b Except two rooms, in which the light is good.

c Except three rooms, in which the light is fair.

d Except two rooms, in which the light is excellent.

e Occupied by carpentry and cooking schools.

TABLE III.—Showing half-day schools.

School.	Half-day schools.		Grades of half-day schools.	Number above second grade.	
	1899.	1898.		1899.	1898.
Tyler	6	4	1, 1, 2, 2, 3, 3	2	
Cranch	3	3	1, 1, 2		
Birney	6	5	1, 1, 2, 3, 3		2
Hillsdale	2	2	1, 2		
Good Hope	2	2	1, 2-3	1	1
Van Buren	5	5	1, 1, 1, 2, 2		
Total	24	21		3	3

TABLE IV.—Showing distribution of pupils by grades, attendance, and average number per teacher.

Grade.	Number of schools.		Whole enroll-ment. <i>a</i>		Average enroll-ment. <i>a</i>		Average daily attendance. <i>a</i>		Average number of pupils per teacher. <i>b</i>	
	1899.	1898.	1899.	1898.	1899.	1898.	1899.	1898.	Based on whole en-rollment.	Based on average enroll-ment.
WHITE.										
Eighth	2	2	109	115	87	91	79	86		
Seventh	3	2	133	137	117	107	108	102	41	
Sixth	3	3	206	191	174	160	162	149	37	34
Fifth	4	5	283	271	231	232	214	215	52	32
Fourth	6	6	342	331	286	287	258	215	48	44
Third	8	6	403	365	347	318	315	263	46	41
Second	7	6	424	389	348	341	318	294	45	39
First	11	11	507	564	354	457	318	315	48	39
Kindergarten	1		59		39		317	410	44	41
							33		44	31
									59	39
Total	<i>a</i> 54	<i>a</i> 50	2,466	2,363	1,983	1,993	1,804	1,834	47	38
COLORED.										
Eighth	1	1	32	37	27	32	25	30		
Seventh	1		54	49	52	36	49	34	32	27
Sixth	1		73	56	63	49	60	45	37	35
Fifth	1	1	90	89	72	72	64	68	37	32
Fourth	1	1	104	104	81	89	75	83	49	40
Third	3	3	186	156	146	126	129	115	53	41
Second	3	3	168	178	144	137	135	126	41	34
First	4	4	281	267	198	199	180	184	46	39
									54	39
Total	<i>a</i> 22	<i>a</i> 20	988	936	783	740	717	685	44	36
Grand total..	<i>a</i> 76	<i>a</i> 70	3,454	3,299	2,766	2,733	2,521	2,519	46	37

a Including ungraded schools. *b* Excluding ungraded schools.

TABLE IV, SUPPLEMENT.—Number of ungraded schools.

Grades.	White.		Colored.	
	1899.	1898.	1899.	1898.
Eighth, seventh and sixth	2	2		
Seventh and sixth				1
Seventh, sixth and fifth			2	1
Seventh, sixth, fifth and fourth				1
Sixth and fifth	1			
Sixth, fifth and fourth	1	1	1	1
Fifth and fourth	2	2		
Fourth and third			2	1
Third and second	2	3		
Third, second and first			1	1
Second and first	1	1	1	1
Total	9	9	7	7

TABLE V.—Showing percentage of attendance, cases of tardiness of pupils, and absence and tardiness of teachers.

TABLE

Months.	Percentage of attendance.	Tardiness of teachers.	Cases of tardiness.		Substitute service.	
			1899.	1898.	1899.	1898.
WHITE.						
	96.3	0	67	30	1.0	4.0
September	91.7	9	171	124	4.5	9.5
October	92.8	15	190	160	23.0	13.0
November	91.6	21	169	148	27.5	9.5
December	90.0	22	169	209	26.5	18.0
January	82.1	40	136	193	29.0	26.0
February	88.4	15	194	187	46.0	48.0
March	92.4	14	92	166	27.5	22.5
April	90.2	18	197	156	33.0	15.0
May	93.5	12	76	115	7.5	34.0
June		166	1,461	1,488	225.5	199.5
Total						
COLORED.						
	97.1	1	12	37	4.0	.5
September	94.4	2	72	84	7.0	9.0
October	94.1	3	75	102	3.0	15.5
November	91.6	5	70	72	4.0	0.0
December	91.6	2	81	98	11.0	4.5
January	80.6	2	48	76	5.0	6.0
February	90.3	2	81	71	18.5	1.0
March	91.0	1	48	69	2.0	4.0
April	90.1	2	62	64	7.5	10.0
May	91.3	2	18	35	5.5	3.5
June		22	567	708	67.5	54.0
Total						
Grand total		188	2,028	2,196	293.0	253.5

TABLE VI.—Showing the number of graduates from the Washington normal school, other normal schools, colleges, and nongraduates.

White:

Washington normal school	39
Other normal schools	4
Colleges	4
Nongraduates	
Total	54

Colored:

Washington normal school (ninth, tenth and eleventh divisions)	16
Other normal schools	3
Colleges	2
Nongraduates	
Total	22

DRAWING.

WASHINGTON, D. C., *July 1, 1899.*

DEAR SIR: All suggestions made during the year on the part of the drawing teachers related to the order of the presentation of subjects and to methods of developing the same, to the end that the whole subject of drawing in our schools may become more closely identified with life in and out of school, and to the broadening and uplifting of that life. All suggestions before given were carefully considered with these ends in view.

No additions of subject-matter were made to the prescribed course of study.

After consultation with the director of manual training it was decided that the number of working drawings required to be sent to the shop in the seventh grade be reduced from seven to five.

Meetings of fifth and sixth grade teachers were held for the purpose of giving instruction in the use of brush and ink to be used in connection with representation. Heretofore the pencil has been used exclusively. The brush and ink process is very simple, all that differentiates it as a medium being easily acquired in one lesson. As in their progress through the schools pupils coming into these grades have used water colors for four years, this brush and ink work continues to give them some of the benefits accruing from the use of the brush with water colors, namely, the power of seeing form in the mass instead of seeing edges only; the habit of seeking to form in the mind a clear conception of essentials before attempting to represent the subject (necessary since no erasure is possible), and facility of expression. Two ink silhouettes can be made by the average pupil in the time that he would give to an outline drawing of the same object. The advantages of this form of expression and the results attained were quickly appreciated by teachers and children.

SCHOOLROOM DECORATION.

In the early part of the year meetings were held by the director for the purpose of interesting principals of buildings in the subject of school decoration. It was suggested that teachers in the several divisions should organize for the purpose of collecting information setting forth what other cities had done, how money had been raised, what resources were available for the selection of suitable subjects for decoration, and to discuss methods as adapted to local conditions.

A general interest was aroused throughout the schools. Supervisors held meetings in which the subject was informally discussed. It was decided that the main effort for the year should be centered on the decoration of the halls of school buildings and to the improvement of the wall spaces of buildings where they were not in condition to give a proper (artistic) background to pictures and casts.

The work of raising funds and selecting material for those buildings where the halls were in suitable condition was begun immediately. The decoration of a building being of common interest to all the schools in that building, the teachers of each building arranged for an entertainment, to which the talent of all the grades contributed and in which parents and friends were interested. One entertainment sufficed in most instances to supply the funds necessary for the accomplishment of the decoration scheme planned. It accomplished more than this, however. The interest of the teachers in the selections made and their observation of the results obtained led to a broader conception of the object of the movement, better taste in the selection of subjects, and a truer artistic conception of their arrangement, all of which will insure better results in the individual schoolrooms.

Thirty-six buildings show very decided results from these efforts. In other buildings where permanent conditions were unfavorable the money was expended for the decoration of the schoolrooms. In other cases teachers are waiting for necessary wall repairs and for picture moldings. In a few schools the money raised toward the close of the year is not yet expended.

In addition to the general decoration of the halls, much is being done in the schoolrooms. Nearly every room possesses one or more art objects—a plaster cast, a vase, or a good picture. Many of the rooms are more extensively provided for. In some cases a corner is artistically arranged. Much more will be done when more walls are tinted and more picture molding is provided. As stated above, much of this has been done, but more remains to be done. If the preparation of the walls by the authorities ready for our use is continued, I am confident that the good will, energy, and taste of our teachers can be depended on for many desirable results in this direction, especially in the higher grades. In the lower grades, because of frequent changes from room to room, and even from building to building, we can not expect the altruistic spirit to be strong enough to induce teachers to put forth as great efforts as do those teachers who remain from year to year in the same room. There are other obvious reasons for the necessity for some concerted effort to provide the means to make all rooms attractive.

The rooms occupied by the kindergartens, introduced into our school system last year, have, through the interest of the superintendent and by the efforts of the teachers, been made very attractive. The decoration in a correct manner, embracing subject, treatment, and arrangement, of the rooms in which these embryonic primary schools are located is, to my mind, of especial and paramount importance, because of the influence of environment on children of the kindergarten age.

I can not but think that the influence of their changed environment has led many teachers to a clearer conception of the importance of this movement.

The difficulty of properly carrying out a scheme of decoration is increased because of the desks, seats, and other appliances of the school-

room, which must be duly considered in their relation to the decorative additions. This is applicable more to the regular grade rooms than to those devoted to kindergarten purposes, since these latter are for the most part devoid of stationary furniture. Each room is a separate problem. Only a few general rules can be given:

1. With limited means get a few good things rather than many that are of less educational value. Trust to the future for additions.
2. Select large rather than small objects. If a few small objects are desirable, as vases, or small pictures, or medallions, group them into a pleasing whole. Small pictures should not be hung above the eye line.
3. Pictures should be framed in the simplest possible styles and should be well backed, that they may the more easily be kept free from dust. Consider carefully the light as well as the space in hanging pictures.

Little direct effort has been made to interest the community in this work, but the time is near when the attention of those who can understand will be attracted by what our unaided efforts have accomplished. I have no doubt that when the importance of this movement is recognized aid will be given to enable us to keep the standards high and to attain the best results.

PICTURE STUDY.

Picture study is a subject apart from that of school decoration, although some of the aims of the two are identical and the one subject perfectly supplements the other.

Pictures are a very conspicuous element in our modern environment. Of all grades of excellence, for all purposes, pictures are ever present seeking interpretation. How to classify pictures, how to study them, how to read in the light of history the messages of the past that they bear to us, how to recognize in the best of them the underlying principles of all creative art—all this and more is included in picture study.

Increased facilities for good reproductions of the famous pictures of the Old World have made it possible for all to enjoy much that was formerly restricted to the favored few. The use of pictures in schools to illustrate subjects and to interest the learner is as old as the making of schoolbooks. In order to fully understand the messages they bear to us, pictures must be studied as literature is studied. The life, character, and environment of the great artist must be recognized as being as worthy of study as those of the great writer. It must be understood that there are poetic and prose artists, realistic and romantic styles.

Picture study is a new idea in popular education. I shall not here enlarge on its value; I shall only present three facts that seem to me worthy of consideration by those who doubt the value of picture study as an instrumentality in education.

We are teaching the language of this art in our schools, and ask our children to use it in embodying their own conceptions. It is obvious that pictures bear the same relation to this form of expression that literature does to verbal language.

Vile pictures are as degrading to the moral sense as vile literature. Good pictures are as elevating in their influence as good literature.

Pictures are international as a means of communication. Their language unifies. It does not divide. Art is a universal language linking the present with the past and each nation with every other, speaking directly, not through translation.

The growth of picture study both in the public and in the private schools of our country within the last few years has been almost phenomenal. In our own schools there has been a growing appreciation of its value that has not in any way been forced. Teachers eagerly availed themselves of the increased facilities offered by the publishers of reproductions to add to their collections for illustrating the history and literature required by the course of study. Meanwhile the director was giving courses of lessons on schools of painting in the normal school, using large numbers of pictures, and was also giving detached model lessons to schools. These lessons were received with great favor, producing good results, which were widespread, as many teachers gave the same or similar lessons in their schools.

The first effort to give such assistance to large bodies of teachers as would make them feel strong enough to take up the work in their schools was made during the past year. Meetings were held of sixth, seventh, and eighth grade teachers for the study of the English and American painters. These were selected as being most closely connected with the other subjects in which the teachers of these grades are interested. An outline was prepared for the blackboard, giving, chronologically, all names and dates relating to the artists under consideration. This outline embraced, also, the reigns of kings and queens, and important contemporary data. The artists studied were grouped into periods, marking prominent points of artistic development. Each artist was designated by his specialty, as portrait, genre, animal, or landscape. A bibliography was added. Each teacher made a careful copy of this outline. Having thus provided for the historical setting, the time could be given to the consideration of the artists and their works, and to the examination of the ample supply of pictures provided. The lesson closed with suggestions as to the making up of units for school work on different lines, as by periods, the work of one artist, of one class of artists, as animal, landscape, etc., or of a single picture. The story of the early American painters, including their English training and their successes, was suggested to those teachers whose classes were studying colonial history.

The use to be made of the suggestions was left to the judgment of the teacher. It was a handful of seed, but carefully selected and sown in good ground. It is astonishing how many pictures and how much information the teachers, incited by these meetings, afterwards found in their homes, easy of access—matter that had possessed no attractions for them previously. As it was necessary to give six lessons of this character to cover the ground mapped out, all the time that the

director felt justified in giving to this subject in the grades was consumed. The same subject, more elaborately treated, was taken up in the second-year normal class in a course divided into periods.

Other schools of art will be selected for the coming year.

There were but few schools at the close of the year that did not possess sets of pictures for use of the children. Many talks were given in connection with these pictures, although no prescribed methods or times of presentation were given.

Very respectfully,

Mr. W. B. POWELL,

Superintendent of Schools.

S. E. W. FULLER,
Director of Drawing.

MANUAL TRAINING.

WASHINGTON, D. C., *July 1, 1899.*

DEAR SIR: The work of the year presents, for the most part, results so similar to those usually seen and heretofore discussed that it is perhaps unnecessary to speak of it in much detail, although there are a few points to be noted.

Further experience with the teaching, by the regular drawing teachers, of design as applied to inlaying for the seventh and eighth grade bench work demonstrates its value to the latter. The designs are better although they may still be criticised as being too elaborate in many instances, a fault which is gradually being eliminated.

Of the changes in the high-school manual training as set forth in the report by the director of high schools, I wish merely to say that they have resulted already in giving our work the better balance needed. Although a few years will be necessary for the proper development of the new work the organization of the various courses, old or new, is now possible.

Because of inadequate facilities it will be difficult at least properly to adjust the relative weights of the various courses but the experience under existing conditions will serve us well when the new building provides better accommodations.

The new two-year course has not proved as satisfactory as had been hoped, but there are extraneous reasons which seem to explain this failure. These reasons appear incident to the first year of the work and to the manner of its introduction; it is believed they will not be operative to the same degree, at least, another year.

The new course was proposed in the hope that its usefulness might appeal more strongly to a considerable number of boys than existing courses appeared to do. That this hope will be realized seems probable, but care may be necessary to prevent the selection of this course

by boys whose real interests would be better served by another. That the general high-school standard of attainment will need to be modified is possible, though not yet determined. If such modification is found necessary, it is believed that it can be made without prejudice to the course or to the school. The pupils coming to this course have been certified by the eighth-grade teacher as fitted to take up high-school studies. If, therefore, the regular work of the school is too difficult for them as a body, does the cause lie with the pupils or with the work? It would appear that the work should be suited to the abilities of those seeking to be benefited. Otherwise there would be a gap, apparently, in the school system, over which only the few of special ability could leap. Is the high school for such as these alone? Is it, in other words, a *high* school, a school apart, or is it a consistent part of the common schools? If the former, that fact determines its standards; but if it should equally well serve those of less (?) ambition and capacity, its standards, where affected, must be modified. Limited only by the necessities of the organization of the school, the student's status, especially in this course, should not be a comparative one. If he is working conscientiously, his attainment, in the majority of cases, should be satisfactory. If he were not here he would not, perhaps, be advancing at all; possibly he would be retrograding. If his stay opens to him a wider outlook, perhaps upon a higher plane; if it tends to save him from the depressing influences surrounding boys of his age in many of the positions open to his untrained abilities, the school may well be called a high school for him in the best sense of the word.

There is now a prospect that the new building will be erected during the next school year. It is now assured that this will be for an independent manual-training high school. This change of plan has doubtless caused delay, but it means much to the welfare of the work in Washington. Only as an independent institution does the manual-training school achieve its highest degree of success. Affiliation with a large, well-established school is theoretically alluring and has its advantages, but there are also too many disadvantages. The testimony on this point from men of experience is very strong. It is primarily a question of difficulty of organization; secondarily, one of that prejudice which is a natural outgrowth of training and not necessarily deserving of condemnation. There must be the utmost sympathy between the two classes of teachers, academic and manual.

I append a few statistics.

Number of seventh-grade boys enrolled in city shops at the opening of school	901
Number of eighth-grade boys enrolled in city shops at the opening of school	738
Number of boys enrolled in high-school shops at the opening of school....	225
Number of boys enrolled in county shops at the opening of school	260
Total enrollment at the opening of school	2,124

Total enrollment at the close of school	
Average enrollment	1,786
Cost of maintaining 5 high-school shops	1,954
Cost per pupil (average enrollment 207)	\$836.20
Cost of equipment for foundry	\$4.03
Cost of maintaining 10 city grammar-school shops	\$146.35
Cost per pupil (average enrollment 1,498)	\$2,237.56
Cost of maintaining 8 county shops	\$1.49
Cost per pupil (average enrollment 249)	\$331.29
Total cost of maintaining all shops	\$1.33
Cost per pupil (average enrollment 1,954)	\$3,405.05
High-school shops, 624 and 626 O street nw. (principal, Mr. A. I. Gardner; assistants, Messrs. R. B. Hayes, F. E. Skinner, and H. B. White):	\$1.74
Machine shop—	
Boys from the third and fourth year classes, Central	
Cost of repairs, supplies, and new tools	50
Forging shop and foundry—	\$389.40
Boys from the second-year class	
Cost of repairs, supplies, and new tools	89
Wood-turning and pattern shop—	\$198.71
Boys from the first-year class	
Cost of repairs, supplies, and new tools	86
Drafting room (for all pupils receiving instruction in above shops), cost of supplies	\$158.98
Grammar-school shops, bench work:	\$89.11
624 and 626 O street nw. (instructors, Messrs. P. L. O'Brien and R. V. Phelps)—	
Boys from the Abbot, Eckington, Henry, Morse, Polk, Seaton, Twining, and Webster schools	
Cost of repairs, supplies, and new tools	293
Blair School, I street, between Sixth and Seventh streets ne. (instructor, Mr. R. T. Pumphrey)—	\$566.67
Boys from the Blair, Hamilton, Hayes, Madison, and Pierce schools	
Cost of repairs, supplies, and new tools	135
Gales School, First and G streets nw. (instructor, Mr. J. A. Mont- gomery)—	\$206.14
Boys from the Arthur, Blake, Gales, and Taylor schools	
Cost of repairs, supplies, and new tools	153
646 Massachusetts avenue ne. (instructor, Mr. J. K. Potter)—	\$146.56
Boys from the Carbery, Hilton, Maury, Peabody, and Towers schools	
Cost of repairs, supplies, and new tools	181
Seventh and G streets se. (instructor, Mr. J. A. Degges)—	\$204.41
Boys from the Brent, Lenox, Towers, Tyler, and Wallach schools	
Cost of repairs, supplies, and new tools	172
Jefferson School, Sixth and D streets sw. (instructor, Mr. E. J. Dakin)—	\$117.90
Boys from the Bradley, Greenleaf, Jefferson, and Smallwood schools	
Cost of repairs, supplies, and new tools	163
Thomson School, Twelfth street, between K and L streets nw. (instruc- tor, Mr. W. R. Sheid)—	\$238.41
Boys from the Dennison, Franklin, Harrison, Phelps, and Thomson schools	
Cost of repairs, supplies, and new tools	170
	\$278.39

Grammar-school shops, bench work—Continued.

Force School, Massachusetts avenue, between Seventeenth and Eighteenth streets nw. (instructor, Mr. F. Schweinhant)—

Boys from the Adams, Berret, Dennison, Force, Grant, and Harrison schools 174

Cost of repairs, supplies, and new tools \$238. 75

1359 Thirty-second street nw. (instructor, Mr. T. W. Fuller)—

Boys from the Addison, Corcoran, Curtis, Fillmore, Grant, Jackson, Toner, and Weightman schools 179

Cost of repairs, supplies, and new tools \$240. 33

Johnson School annex, Mount Pleasant (instructor, Mr. F. L. Harries)—

Boys from the Chevy Chase, Johnson, and Monroe schools 70

Cost of repairs, supplies, and new tools \$78. 83

Brightwood School, Brightwood (instructor, Mr. E. F. Pywell)—

Boys from the Brightwood School 26

Cost of repairs, supplies, and new tools \$61. 61

Brookland School, Brookland (instructor, Mr. F. L. Harries)—

Boys from the Brookland School 25

Cost of repairs, supplies, and new tools \$25. 60

Van Buren annex, Anacostia (instructor, Mr. E. F. Pywell)—

Boys from the Van Buren School 34

Cost of repairs, supplies, and new tools \$46. 45

Anacostia Road, Benning (instructor, Mr. E. F. Pywell)—

Boys from the Benning School 12

Cost of repairs, supplies, and new tools \$9. 15

Benning Road School, Benning (instructor, Mr. E. F. Pywell)—

Boys from the Benning Road School 13

Cost of repairs, supplies, and new tools \$10. 66

Hillsdale School, Hillsdale (instructor, Mr. E. F. Pywell)—

Boys from the Birney, Garfield, and Hillsdale schools 49

Cost of repairs, supplies, and new tools \$35. 24

Mott School, Sixth and Trumbull streets nw. (instructor, Mr. F. L. Harries)—

Boys from the Mott, Military Road, and Wilson schools 37

Cost of repairs, supplies, and new tools \$63. 75

Very respectfully,

J. A. CHAMBERLAIN, *Director.*

Mr. W. B. POWELL, *Superintendent.*

COOKING SCHOOL.

DEAR SIR: I beg to submit the following report of the school kitchens of the first eight divisions for the year 1898-99:

From persons engaged in missionary work among the poor, from the reports of scientists in the Agricultural Department engaged in investigating the food supply of the people, as well as from our own observation and experience, we have learned that those who have the least money to spend know the least about how to use it to the best advantage, frequently spending more for food relatively than those who have

much money. The boast of the American laborer is that he buys for his family the very best food which the markets afford, meaning that he buys that which costs the most. It is true that he does do this, but, in too many instances, because of the high price of the food that he buys, he is not able to provide enough with which to nourish his family. In too many instances, also, that which he does buy is so cooked as to be deprived not only of its flavor but of the small amount of nutrient material which it contains as well. He would have more money with which to buy a home or to beautify the one he owns or rents, and would at the same time be better nourished if he would buy, not a cheaper grade of the same kind of food, but an entirely different kind of food, which, though it costs less, yields more nourishment than that which he is wont to buy. To teach children this and to teach them how to prepare food, so that it shall retain its full flavor and its nutritive properties, which is true economy, has been our aim ever since the cooking schools were started. Because our attention was again called to this important side of the work by reading the bulletins sent out by the Agricultural Department, increased effort was made to impress it on the pupils of both day and night classes during the past year.

Another fact which was emphasized was, that dirt being the breeding ground for many forms of disease, to prevent the transmission and spread of disease absolute cleanliness of person and surroundings is necessary. To aid in securing this cleanliness plenty of soap and water, especially hot water, should be used, and an abundance of fresh air and sunlight admitted to the cooking apartment. If all the teachers possessed an intelligent knowledge of physics, chemistry, physiology, and dietetics they would be able to do even better work than they do now. They are at present, however, giving work of the same character as that which is given in many high schools and colleges.

Pupils in the high school are able to take and should be given a broader course in domestic science. When the manual training high school is opened a full course in domestic science should be offered to students. This will give them a knowledge of house building and furnishing, of sanitation, of the composition of food materials gained from chemical analysis, and of housekeeping, which, with the knowledge of the cost of materials, sources of supply, and methods of mixing and cooking the food, which they have gained in the grades, will make them better home makers, and will enable them to enter other avenues as breadwinners.

LUNCH ROOM.

The quality and quantity of food eaten by high-school pupils at noon has long been a subject of serious consideration. It was believed that high-school pupils, if given the opportunity, would eat wholesome food in preference to those wonderfully and fearfully made specimens of the pastry-cook's art which too generally constitute the high-school pupil's midday meal. During November a project long contemplated was

developed and put into operation. This project was the establishment of a lunch room which should be self-supporting, for pupils of the high school, directly under the control and supervision of school authorities, where well-cooked, nutritious food could be purchased at low prices. A room in the basement of the new Western high school was set apart for this purpose. It is to be regretted that the lunch room is not above ground and so located as to receive the sunlight for a portion of the day.

After several consultations with yourself and the principal of the school, a plan for conducting the lunch room was prepared and submitted to the board of trustees. Receiving their full sanction, a circular letter, explaining the project and giving sample menus and a schedule of prices, was sent to patrons and other friends of the school. The room was then furnished, a portion of the building fund of the new school being available for this purpose. Besides the necessary dishes and utensils for preparing and serving the food, the equipment consisted of long, narrow tables, folding chairs, and stools. Each table was covered with a heavy silence cloth, over which a linen one was spread. Finger bowls and paper napkins were also supplied. A refined, well-educated woman was engaged at a stated salary to buy the raw materials, prepare the food, and serve the same to the students, for all of which I gave careful directions, as well as in preparing the menus. For the work of serving the food, as well as for that of cleaning the room after lunch was served, the woman in charge of the lunch room had two assistants. I visited the school frequently during the year at the noon period to examine the quality of the food prepared and offered for sale.

The first lunch was served November 30. The food was sold over a long counter to students, who paid for it with checks which they had obtained before or at the beginning of the lunch period from the principal or from one of the teachers. The principal took charge of all money and paid all bills.

The lunch consisted of soup, cocoa, milk, bread, sandwiches, small cakes, fruit, and sweet chocolate, varied by the addition of baked beans or oysters, a salad, a simple custard, or other dessert. A different kind of soup and sandwich were offered each day.

We discovered that the cheaper but more nutritious soups, made of the legumes, with and without milk, which we served at first, were not relished by the majority of those who patronized the lunch, unless well-flavored with tomato. Of all the soups served the cream of tomato was the most popular; as it was also nutritious, this soup was prepared frequently. Besides the regular meat sandwiches, the more delicate vegetable, fruit, and nut sandwiches were offered. Though these were liked by many, the ham sandwich continued to be the most popular. Sandwiches made of thin slices of bread and meat, though sold for less money, were never so popular as the roll sandwich with plenty of meat. At first there was a demand for pickles, cake, and pie, but the students,

soon realizing that these things would not be furnished, ceased to ask for them, and, I believe, ceased to desire them, as they were seldom seen.

A generous half pint of soup or cocoa, costing 5 cents, bread and butter, supplied for 2 cents, and fruit, the price of which varied, furnished for 10 cents a lunch which was most palatable and nutritious. Those who did not care to spend more than 5 cents were able to secure a lunch nearly as nutritious as the other by buying a glass of milk for 2 cents, bread and butter for 2 cents, and an apple or a piece of chocolate for 1 cent.

From the beginning the lunch was a popular feature of the school, the pupils greatly appreciating the opportunity to obtain something hot for lunch. Since it is reasonable to suppose that everyone objects to eating a cold lunch, although most carefully prepared, which has been kept in a napkin or box for half of the day, it is a wise movement to provide a hot lunch which shall be wholesome, nutritious, and palatable, and at the same time cheap, for those who desire to avail themselves of it. Few people, in the United States especially, eat enough at breakfast to properly sustain them at their work without additional nourishment until they return home for a late dinner. As a consequence, exhaustion, coupled frequently with headache, results. Moreover, being very hungry, because of the many hours that have elapsed since the last meal, those who forego a midday lunch eat hurriedly at the evening dinner more than the digestive organs have the power to prepare for bodily uses. These organs, being taxed beyond their strength by the large quantities of imperfectly masticated food that is forced on them, soon rebel. The food is then imperfectly digested. Broken sleep follows, from which one awakes unrefreshed and without appetite, hence unable to eat sufficient food to supply force for the day's work. Large quantities of tea or coffee, which are stimulants, not food, are then taken to provide this force. With warm weather the appetite decreases, so that this bad condition of the system becomes worse. The remedy is the midday meal. At noon a small quantity of hot, well-cooked food should be eaten, which will nourish the body and supply force enough to sustain vital powers until dinner time. The food then taken will be eaten slowly and only in such quantity as can be perfectly digested without overtaxing the digestive organs, after which the night's sleep will give healthful rest, insuring an appetite for breakfast. With sufficient rest and food, food of the right kind taken at the proper times, much of the fatigue and headache complained of by high-school students can be prevented. That this is true was shown at the Western high school last spring. Lunch was eaten with relish daily by the students until the end of the term, and there were not only fewer cases of headaches, but students were able to do more and better work than during the same periods in previous years. Could lunch rooms be provided, so that all pupils could obtain well-cooked food for

their lunches, our children would be better equipped, mentally and physically, for life's duties when they leave school than they now are.

The Western high school lunch room was more than self-supporting, the surplus being used to increase the equipment. It is seen then that could money enough be obtained to start other rooms, completely furnished, the price of the food could be so reduced that even the poorest child could afford to buy his lunch at the schools; could afford it not only because of its cheapness, but because of the greater nutritive value of the food given than that which he is apt or able to bring to school with him.

NIGHT SCHOOLS.

The night schools continued to be popular. That at the Wallach was opened three nights each week during the term. Even though the night school at 609 O street was opened four nights each week all who applied there for instruction could not be accommodated, it being necessary to turn some away.

As the majority of those who attend the night cooking schools are young housekeepers who realize and appreciate the value of the help they receive from the lessons, other kitchens should be opened that the influence of this work on the homes of the community may be more general. From those who have attended I receive many words of thanks for the benefits they received.

NEW KITCHENS.

A new kitchen was established at the Thomson building, to which the pupils from the Franklin, Webster, and Thomson were sent. By this arrangement there was a better attendance on stormy days and less complaint from pupils, who, during the previous years, were obliged to walk to the Force or Seaton kitchens. Each class at this kitchen was divided into three parts or groups, each engaged in preparing the same material, but working at a separate table. This method was liked very much, because it gave more frequent opportunity for the girls to handle the materials and utensils. It was more expensive than the plan used in the other schools, however.

The crowded condition of classes at the Seaton was relieved by sending pupils from the Webster to the Thomson, but there was not sufficient relief given to allow a reduction of the number of pupils in each class to 14, which has been found to be the number with which the best work can be done. Several classes at 609 O street and many at the Wallach number more than this. Even with the large classes at the Wallach it was impossible to provide for all; hence one seventh grade was deprived of the lessons. These are the very ones to whom the work should be given. To enable the pupils to gain sufficient experience in handling materials and utensils, to make them instruments for good in their homes, the classes should be small; hence another kitchen should

be established south of the Wallach where from 6 to 8 classes could be accommodated. A new kitchen should be established in the neighborhood of the Gales or Blake to give relief to the Seaton and 609 O street.

TEACHERS' MEETINGS.

The teachers met for conference regularly each month, at which time a report of the work done was given. These meetings enabled me to keep in touch with the teachers, though I was unable to visit them at their schools as often as in previous years, the increase in the number of classes making it necessary for me to teach two days each week at the Thomson. Whenever I did visit the teachers I found them doing good and earnest work, even more earnest than in the other years, because of a greater appreciation of the value of this work as a means of raising the standard of home life.

The majority of the pupils were enthusiastic in their work; hence there was little trouble in holding the attention of the classes. There are some children who still think that cooking is only a means of recreation, hence they feel that they should not observe the same rules as in the regular schoolroom. Were all pupils sent to the kitchens with the idea that cooking is as much a part of their school-work as any other subject from which to gain ability to do life's work, we should have still less trouble to hold the attention of the children.

Many pupils think that the laws governing written language, which they have learned and apply when writing compositions, do not apply to other written work, especially to the writing of recipes. There is also a tendency to scribble the recipes on paper, then to copy them into the notebook at some other time. To prevent this, as well as to make them remember to bring their notebooks to each lesson, requires great vigilance.

The following is a statement showing the number of classes taught by each teacher and the amount of money expended for provisions:

Name of teacher.	Where teaching.	Pupils received from—	Number and kind of classes.	Number of pupils.	Amount used for provisions.
Miss E. W. Cross	Force School....	Force, Adams, and Berret schools.	4 eighth and 5 seventh grade.	127	\$53.48
Misses E. W. Cross and E. S. Jacobs.	Thomson School	Franklin, Webster, and Thomson schools.	6 eighth and 5 seventh grade.	174	81.48
Miss E. W. Saxton.	Dennison School	Berret, Adams, Phelps Harrison, and Dennison schools.	6 eighth and 6 seventh grade.	201	.....
Miss E. W. Saxton.	Mott School	Wilson school	1 eighth and 1 seventh grade.	25	69.82
Miss Marian White.	609 O street.....	Henry, Polk, Morse, Abbott, Twining, and Eckington schools.	9 eighth and 6 seventh grade.	233	56.21

Name of teacher.	Where teaching.	Pupils received from—	Number and kind of classes.	Number of Pupils.	Amount used for provisions.
Miss A. M. McDaniel.	Seaton School...	Arthur, Gales, Blake, and Seaton schools.	6 eighth and 9 seventh grade.	249	\$72.10
Miss Florence Jenkins.	Wallach School.	Brent, Lenox, Towers, Tyler, and Wallach schools.	8 eighth and 7 seventh grade.	220	69.87
Miss M. J. Merillat.	Peabody annex, 646 Massachusetts avenue.	Peabody, Carbery, Maury, Towers, and Hilton schools.	6 eighth and 9 seventh grade.	209	70.54
Miss M. E. Davis.	Jefferson School.	Bradley, Greenleaf, Smallwood, and Jefferson schools.	6 eighth and 9 seventh grade.	230	72.56
Mrs. M. A. Burns.	Grant School....	Weightman, Toner, and Grant schools.	3 eighth and 4 seventh grade.	111	-----
Mrs. M. A. Burns.	Johnson School.	Monroe and Johnson schools.	3 eighth and 3 seventh grade.	87	68.40
Miss F. Y. At Lee.	3104 P street....	Curtis, Corcoran, Fillmore, and Jackson schools.	6 eighth and 8 seventh grade.	193	71.39
Miss F. Y. At Lee.	Tenley School...	Tenley	1 seventh grade...	17	-----
Miss F. B. Espey.	Taylor School...	Pierce, Blair, Madison, Hayes, Hamilton, and Taylor schools.	7 eighth and 7 seventh grade.	210	71.15
Miss J. P. Wilkinson.	County Schools.	Anacostia Road, Benning Road, Hillsdale, Van Buren, Mott, and Brightwood schools,	7 eighth and 7 seventh grade.	200	70.84

To the supervisors and teachers, as well as to yourself, I wish to extend hearty thanks for the interest and cooperation which have made it possible for my teachers to accomplish so much.

Very respectfully,

EMMA S. JACOBS,
Director of Cooking.

Mr. W. B. POWELL, *Superintendent.*

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SEWING SCHOOLS.

WASHINGTON, D. C., *September 7, 1899.*

DEAR SIR: The following report of the work of the sewing schools for the first eight divisions for the year 1898-99 is respectfully submitted:

The sewing classes were organized on September 26, and continued until June 16, 1899.

As in previous years regular monthly meetings of the sewing teachers were held for an exchange of views, and for the purpose of insuring uniformity in methods and details, in the work of the several teachers.

One additional teacher was appointed early in the year, for the colored schools located in the county, and one new cutting and fitting school was established at the Peabody school, accommodating pupils from the Peabody, Carbery, Hilton, and Maury buildings. An additional cutting and fitting school should be located in the neighborhood of the Grant, Toner, and Weightman schools, to accommodate the pupils from these buildings, those of the Weightman being now required to attend the Georgetown school, and the Grant and Toner pupils being unprovided for.

The work of the past year was characterized by a decided advance in the line of class instruction as distinguished from individual direction to pupils. This enables the teachers to broaden their instruction considerably, and to include short talks upon the growth, treatment, and application to daily needs, of the various fibers and plants employed in the manufacture of articles used in the work, thus imparting much general knowledge in such a manner as to impress the minds of the pupils. For example, it is interesting to follow the evolution of the cotton pod into thread ready for the needle, and to learn the origin of silk and linen fabrics, and in addition to the useful knowledge acquired in this way we find that the monotony of the work is relieved and the interest of the pupil retained by the brief explanations of things collateral to the main work.

At the beginning of the last school year sewing classes were started in the following new school buildings: Eckington, Hilton, Chevy Chase, Toner, and Bruce. Another additional class was located at Ivy City, where sewing had not been taught previously.

During the coming year further extensions of the work will doubtless be required, by reason of the opening of several new buildings, and as the time of all of the present force of sewing teachers was fully occupied the past year, it will be necessary in order to provide for the new schools to appoint one additional teacher, and I therefore recommend such appointment.

I append hereto a detailed statement showing the number of pupils instructed and the division of the work among the teachers. And in conclusion, I desire to commend the earnest work of the sewing teachers, and to thank them, as well as the supervising principals and yourself, for the aid and cooperation in making the work of the past year successful and satisfactory in all respects.

PLAIN SEWING CLASSES.

Name of teacher.	Where teaching.	Number of pupils.	Number of classes.
Miss M. C. Henry	Thomson, Force, Berret, Dennison, Phelps, Harrison, Seaton, Polk, and Abbot schools.	545	23
Mrs. S. M. Davidson	Peabody and Hilton schools.....	210	9
Mrs. A. L. Norris	Jefferson School.....	137	4
Miss E. R. Thornton	Towers School	81	3
Mrs. C. L. Stanton	Jackson, Fillmore, Thelkeld, Addison, Curtis, Corcoran, High Street, Tenley, and Reservoir schools.	506	23
Miss Kate Graham	Brent, Lenox, McCormick, Greenleaf, Amidon, Smallwood, Bradley, and Potomac schools.	634	24
Miss A. M. Wells	Arthur, Monroe, and Woodburn schools.....	199	9
Mrs. E. M. Colhoun	Adams, Webster, Cranch, Buchanan, Tyler, Chevy Chase, and Henry schools.	645	24
Miss Hannah Draney	Brookland School.....	65	3
Miss S. A. Dalton	Maury School	91	5
Miss Charlotte White	Hayes, Blair, Blair annex, Taylor, Taylor annex, Madison, Pierce, and Jefferson schools.	608	23
Miss Genevieve Cassin	Toner, Weightman, Grant, Johnson, Wallach, Garfield, and Good Hope schools.	668	24
Mrs. F. P. Polkinhorn	Blake, Gales, Franklin, Morse, Brightwood, Hamilton, and Langdon schools.	588	22
Miss Caroline Dodson	Benning, Van Buren, Van Buren annex, Twining, Eckington, Pierce annex, and Congress Heights schools.	473	19
Miss Jessie R. Freeman	Benning Road, Ivy City, Hillsdale, Birney, Wilson, Grant Road, Mott, Bruce, and Military Road schools.	559	22
Total .....	.....	6,009	237

Average number of pupils per class, 25.35 +.

CUTTING SCHOOL CLASSES.

Name of teacher.	Where teaching.	Pupils received from—	Number of pupils.	Number of classes.
Miss E. R. Thornton	Seventh and G streets se.	Wallach, Towers, Brent, Lenox, Tyler, and Buchanan.	235	13
Mrs. A. L. Norris	494 Maryland av. sw	Jefferson, Amidon, Smallwood, Greenleaf, Bradley, and Arthur.	206	13
Miss Isabelle Solomons	607 O street nw	Henry, Polk, Morse, Twining, Abbott, Seaton, and Webster.	255	15
Miss S. Amelia Dalton	Eighth and I streets ne.	Hayes, Blair, Taylor, Madison, Pierce, Blake, and Gales.	197	12
Mrs. S. M. Davidson	Peabody School.....	Peabody, Carbery, Hilton, and Maury.	127	10
Miss Hannah Draney	Dennison School.....	Dennison, Force, Adams, Berret, Harrison, Phelps, Thomson, and Franklin.	236	11
Miss A. M. Wells	3104 P street.....	Addison, Curtis, Jackson, Fillmore, Corcoran, and Weightman.	148	9
Total .....	.....	.....	1,404	83

Average number of pupils per class, 16.91 +.

Respectfully,

MARGARET W. CATE.

WM. B. POWELL, Esq.,

Superintendent of Public Schools.

PHYSICAL TRAINING.

WASHINGTON, D. C., *June 30, 1899.*

SIR: In our efforts to make physical training secure for the children all that its name implies, we have tried not to be so dominated by one idea that one phase of the work would predominate to the exclusion of all others. Certain exercises are for the special purpose of improving the carriage of the body, others aim at health through their effect upon the internal organs, others have for their object the control of muscles, while still others develop grace. We have tried to avoid the error of seeing the good in only one kind of exercise, but holding the broad view of the subject of physical training, have given each its place, so that our children may obtain the good to be derived from each and all kinds of exercise.

EFFORTS TOWARD PLAY AT RECESS.

One of the most important features of the year's work was the systematic effort made to encourage play at recess. Believing that the natural instinct of childhood is to play, it is surprising to see children standing around during recess, lacking initiative until a leading spirit proposes a game. Then comes the change from listlessness to animation and activity.

It would seem that three conditions are necessary to the success of plays and games at that time. First, a place in which to play; second, a great number of plays and games from which to choose as well as a few things with which to play; and third, a certain amount of leadership.

Our efforts were spent in teaching new games, merely to increase the list within the knowledge of the children, leaving to them the choice. A great number of games is desirable to suit varying moods and conditions, although, as a rule, children do not easily tire of their favorite plays which frequently depend upon the season of the year. The purpose is merely to keep the children happily and actively playing, no matter at what game, so that there is a healthful activity of body and mind.

Since it was impossible for the special teacher to personally teach games to all the children in a school building, the following plan was adopted: One play or game was specially planned to be taught each grade, although played by other grades. Full directions for these games were written and mimeographed. The whole constituted a set of eight plays adapted to the ages of the children and to the season of the year.

These mimeographed sheets were left with the regular teachers to be read to the children before going down at recess, with the request that they play the game at that time. Whenever time permitted, the special teacher explained a difficult game by means of illustration on the blackboard. In this way there were taught during the year twenty-four plays, most of which were new.

VALUE OF ACTIVE PLAY.

It is believed by eminent authorities who have made a study of the psychology of play, that in the plays of the young of all animals nature is evolving power for the activities of mature life. In the gambols of the kitten playing with the ball is seen the training of eye and muscle in the estimation of distance and force necessary to the successful capture of prey later in life. So in the active plays of early years, children are developing the power to do with their bodies many things which they may be called upon to do in after years. In a recent book by Carl Groos, of Dresden, on Play, the author considers play as a fundamental instinct, and not merely "surplus energy," since there is the desire to play even when the physical powers are exhausted.

With our modern methods of teaching, the variety of school subjects, and the general freedom of the schoolroom, it is doubtful if the mental rest and recreation afforded by the daily recess is of so much value as the opportunity for the tremendous bodily activity in running, jumping, and playing games in the open air, using the large muscles of the legs and trunk which are necessarily least used in the schoolroom. Children do not suffer so much from mental tire as from physical weariness and lack of fresh air.

In his plays and games the child receives excellent mental training, as well as training of nerves and muscles, in being obliged to see, think, and act quickly, at the same time forming judgments as to the requisite amount of force and energy necessary for a perfect action. Many lessons are learned by intercourse with playfellows, not the least of which is sociability, which in many children needs cultivation. Individuality is also strongly brought out in the plays of childhood. A game is a higher form of play having the element of competition. Here the individual has an estimate placed upon his physical powers by both his companions and himself, so that he learns to know himself as compared with others. In the more advanced games, a certain amount of hardness, endurance, and courage are necessary, which are moral in their effect.

The encouragement of plays and games during recess, together with supervision by at least one teacher, is by all means the best way to do away with the objections to the recess on moral grounds. At such times the children have the advantage of playing in the fresh air, are generally happy, while the contagious spirit of fun puts all in a good humor, so that they return from the recess with bright, happy faces into a room which has had the opportunity to be flushed with fresh air. Work begins again under favorable circumstances.

RELATION OF PLAY TO GYMNASTICS.

These two great departments of bodily exercise must go hand in hand in a perfect scheme of physical education; each is incomplete without the other. By no means can plays and games take the place

of a systematic course of physical training, given under direction, thoroughly planned, adapted to the age and ability of the individual, taken regularly, based upon physiological laws, and seeking the symmetrical development of the body. Play bears much the same relation to the whole that dessert bears to the entire dinner; to many it is the most agreeable part of the meal, but lacks the nutritious value of the meat course.

PLAYGROUNDS.

Of the 82 buildings under your supervision, 28 have large playgrounds, 28 are of medium size, 14 are small, and 8 have no ground for outdoor plays, which means that probably 22 buildings are inadequate for the free play of all the children in the building. This state of affairs has been obviated somewhat by having the recess periods of the primary schools at a different time from that of the higher grades. In some schools the interest in play is such that vacant lots in the neighborhood are utilized for this purpose, while in a few places school children are permitted to play in the public parking near by. It is to be hoped that in the future the purchase of school grounds will include ample space for outdoor exercise of children during the school recess.

It would be well, wherever practicable, to supply our play rooms and play yards with ropes, bean bags, bean boards, seesaws, swings, and sand piles for the smallest ones. These are simple things, not dangerous, therefore not requiring the close supervision of a teacher.

Any game with a ball is always a prime favorite and affords excellent training for the hand and eye, as well as calling into action the muscles of the legs and arms. It seems that in some buildings the children are denied the privilege of playing with the ball for fear that windows may be broken or children hurt. This restriction could be limited with safety to the heavy ball, as in many plays the light tennis or other ball is used. With a certain amount of supervision the danger is reduced to a minimum, while in a vacant lot, where there is no complaint, the restriction could be entirely removed. It were better that the school or city supply a window pane which may happen to be broken than that schoolboys of a certain age be deprived of playing with the ball, which has been the plaything of children for ages and furnishes one of the best means of physical exercise and training at recess.

There are a few of our large playgrounds in which it is highly desirable that trees be planted, preferably in a row, for the sake of shade. A shed at one end of the yard would also afford protection from both sun and rain. In a very large treeless yard there is little chance for shade, even by surrounding buildings. During the warmest school-days of the early summer and fall the sun pouring down on the school yard does not offer the attraction for outdoor activities which there might be if trees welcomed the children to the more quiet play in the shade of their branches.

SCHOOLROOM PLAYS.

In the first and second grades we have continued to increase the number of plays adapted to the varying conditions of the schoolroom. It is no easy task to invent or to adapt a play in which all the children can join, and which can be played in the space between the desks or around the room. We have met with such measure of success, however, that our method of work and play has been followed by a number of cities in the country.

One of the most difficult things to get is playfulness in the schoolroom, such as we are obtaining in our primary schools; but along with the greater freedom in all lines of school work teachers are now not afraid to let the children play with much of the freedom with which they would play outside of school, the teacher, however, acting as the director.

GYMNASTIC WORK IN SCHOOLROOM.

When first discussed as a valuable addition to public-school work, physical exercise was advocated by enthusiasts on account of its hygienic value alone. As the years have gone by educators have grasped the broader lines of meaning and begun to appreciate its value as an educational force, aiding in mental development. This is similar to the change which has come in the view of manual training, which was first introduced into schools on account of its practical value. Public school gymnastic work is in itself a distinct branch of physical training in general and needs the best thought of educators and students of educational problems, not merely the knowledge of the gymnast.

Physical exercises suitable to the adult, to the private school, to the home, to the college, or to the public gymnasium are not the kind we must or can have in the schoolroom or school gymnasium with growing children.

As it is a subject for investigation in all lines of educational work, at just what periods of life certain subjects should be presented to the child, at which time the mind is at its height for receiving the subject, thereby teaching it with the greatest economy of time and effort on the part of both teacher and child, so we are studying just what physical exercises to give and when to present them.

Physical training in the Washington public schools has been an outcome of the conditions which surround us. Our children come largely from a class of intelligent, hard-working parents. We do not have the emigrant class of many large cities, nor the manufacturing element of the New England towns, for which reason we have been able to secure more in the way of culture than has been attempted in other cities.

The whole tendency of school hygiene is toward lessening the number of children in each room and the number of desks. Most of our schoolrooms have aisles 20 inches wide, a larger aisle around the room, much free space in the front of the room and frequently in the back.

This gives opportunity for large gymnastic movements. Comparing this with the condition of affairs in some crowded city schools, where the children sit on benches, perhaps two on a seat, with few aisles or narrow ones, sometimes none at the side of the room, and with desks close to that of the teacher, we are indeed favored.

There yet remain a few rooms in which the platform is present. The school platform is of the past and has gone from the modern school along with the school slate. It is to be hoped that during the coming summer these platforms will be removed, and at the same time all unnecessary desks which may have been put down on account of the crowded condition of the school during previous years. Such desks are so much lumber in the schoolroom and take away from the amount of available free floor space.

NORMAL SCHOOL.

During the year a course of talks upon personal hygiene was given to the first-year normal class, besides the usual criticism of schoolroom gymnastic lessons given in the model schools for their benefit, and practice in teaching the same on the part of the advanced class.

Respectfully,

REBECCA STONEROAD,
Director.

Mr. W. B. POWELL,
Superintendent.

Numbers and attendance, 1898-99.

Number of pupils admitted from previous year.....	538
Number admitted at the beginning of the year.....	442
Number subsequently admitted.....	72
Number of withdrawals.....	228
Number at the close of the year.....	824
Whole number enrolled (girls, 609; boys, 443).....	1,052
Average number enrolled.....	917.1
Average number in daily attendance.....	832.6
Percentage of attendance.....	93.3

Average enrollment, average attendance, and percentage for the year 1898-99.

Month.	Average enrollment.	Average attendance.	Percent- age.
September	950.2	932.9	98.1
October	959.0	926.5	96.0
November	972.0	929.0	95.5
December	939.8	887.0	93.1
January	946.0	875.5	92.5
February	924.0	848.0	91.8
March.....	922.0	842.8	91.2
April.....	894.5	843.9	94.3
May	839.1	769.3	92.7
June	824.8	772.2	93.6

Table showing growth of school.

Year.	Number of teachers.	Average enroll- ment.	Year.	Number of teachers.	Average enroll- ment.
1882-83	11	367.0	1891-92	37	937.0
1883-84	13	486.0	1892-93	39	778.0
1884-85	20	598.0	1893-94	42	835.0
1885-86	24	688.0	1894-95	43	894.0
1886-87	28	775.0	1895-96	42	814.0
1887-88	30	913.0	1896-97	44	851.0
1888-89	33	1,107.0	1897-98	43	864.5
1889-90	41	1,274.0	1898-99	43	917.1
1890-91 <i>a</i>	36	1,001.0			

a Decrease accounted for by establishment of branches at Georgetown and Capitol Hill.

EASTERN HIGH SCHOOL.

Numbers and attendance, 1898-99.

Number admitted from previous year.....	290
Number admitted at the beginning of the year.....	217
Number subsequently admitted.....	34
Number of withdrawals.....	127
Number at the close of the year.....	414
Whole number enrolled (girls, 195; boys, 343).....	538
Average number enrolled.....	468
Average number in daily attendance.....	434
Percentage of attendance.....	92.8

Average enrollment, average attendance, and percentage for the year 1898-99.

Month.	Average enrollment.	Average attendance.	Percentage.
September.....	492.8	482.5	97.9
October.....	505.1	483.4	95.6
November.....	499.8	475.3	95.1
December.....	481.3	434.4	90.2
January.....	474.5	435.2	91.7
February.....	468.5	424.1	90.5
March.....	459.0	414.2	90.2
April.....	450.4	423.6	94.0
May.....	432.3	395.6	91.5
June.....	415.4	385.4	92.7

MISCELLANEOUS STATISTICS.

Number in each course, by years.

Fourth year (scientific, 16; academic, 53).....	69
Third year (scientific, 30; academic, 60).....	90
Second year (scientific, 27; academic, 78).....	105
First year (scientific, 76; academic, 152).....	228
Total number in the scientific course.....	149
Total number in the academic course.....	343
Special students.....	46

Number of graduates.

1892-93. (Boys, 31; girls, 37).....	68
1893-94. Fourth year (boys, 5; girls, 6).....	11
Third year (boys, 29; girls, 48).....	77
Total.....	88
1894-95. Fourth year (boys, 9; girls, 16).....	25
Third year (boys 25; girls, 31).....	56
Total.....	81
1895-96. Fourth year (boys, 8; girls, 23).....	31
Third year (boys, 0; girls, 1).....	1
Total.....	32
1896-97. Fourth year (boys, 10; girls, 34).....	44
1897-98. Fourth year (boys, 18; girls, 34).....	52
1898-99. Fourth year (boys, 24; girls, 36).....	60

Table showing growth of school.

Year.	Number of teachers.	Average enrollment.	Year.	Number of teachers.	Average enrollment.
1890-91	7	158.0	1895-96	21	394.4
1891-92	11	239.0	1896-97	21	401.0
1892-93	15	329.0	1897-98	21	445.0
1893-94	17	366.0	1898-99	21	468.0
1894-95	19	393.2			

BUSINESS HIGH SCHOOL.

Numbers and attendance, 1898-99.

Maximum enrollment (October)	587
Second year (boys, 51; girls, 120)	416
First year (boys, 195; girls, 221)	171
Enrollment at the end of the year	369
Average enrollment	491
Average attendance	458
Average per cent of attendance	93.2
Average age of first-year pupils at entrance	16.6

Average enrollment, average attendance, and percentage for the year 1898-99.

Month.	Average enrollment.	Average attendance.	Percentage.
September	530	520	98.0
October	562	542	96.5
November	548	523	95.4
December	529	494	93.2
January	511	468	91.0
February	491	437	89.1
March	478	430	89.9
April	448	422	94.1
May	422	386	91.5
June	370	345	93.3

Table showing growth of school.

Year.	Number of teachers.	Average enrollment.	Number of graduates.	Entering age.
1890-91	8	274	0	16.4
1891-92	9	329	35	16.3
1892-93	11	359	50	16.1
1893-94	12	410	60	16.3
1894-95	13	394	40	16.5
1895-96	17	421	71	16.5
1896-97	19	435	74	16.4
1897-98	20	483	89	16.7
1898-99	21	491	101	16.6

WESTERN HIGH SCHOOL.

Numbers and attendance, 1898-99.

Number of pupils admitted from previous year	164
Number of new admissions	240
Number of withdrawals	122
Number of pupils at the end of the year	282
Whole number enrolled (girls, 232; boys, 172)	404
Average enrollment	339
Average number in daily attendance	310
Percentage of attendance	91.5

Average number, average attendance, and percentage for the year 1898-99.

Month.	Average enrollment.	Average attendance.	Per-centage.
September.....	351.8	345.0	98.1
October	343.2	324.0	94.4
November.....	365.7	345.7	94.5
December	361.4	332.7	92.0
January.....	348.4	313.3	89.9
February.....	345.7	298.6	86.3
March.....	338.6	295.8	87.3
April.....	330.0	311.0	94.2
May.....	305.1	270.2	88.5
June	302.6	279.2	92.2

Table showing growth of school.

Year.	Teachers.	Enroll-ment.	Remarks.
1890-91	2	54.0	First-year pupils.
1891-92	4	104.0	First and second year pupils.
1892-93	7	156.0	First, second, and third year pupils.
1893-94	10	181.5	First, second, third, and fourth year pupils.
1894-95	11	199.0	Do.
1895-96	12	245.0	Do.
1896-97	14	231.0	Do.
1897-98	15	290.0	Do.
1898-99	17	404.0	Do.

Courses of study outlined.

YEAR.	Academic.	Scientific.	Technical. <i>a</i>	Short Technical. <i>a</i>	Business. <i>a</i>
FIRST.	English. History. Algebra. Latin.	English. History. Algebra. German or French.	English. French or Ger- man. Algebra. Manual Training. Drawing.	English. Algebra. Drawing. Manual Training. Physics.	English. Business Arithme- tic. Bookkeeping. Penmanship. Shorthand. <i>Typewriting or Mechanical Drawing.</i>
SECOND.	English. English History. } Greek. Geometry. Latin. Physics or Chem- istry.	English. English History. } French. Geometry. German or French. Physics or Chem- istry.	English. French or Ger- man. Physics. Geometry. Manual Training. Drawing.	English. Geometry. Chemistry. Manual Training. Drawing.	English. Bookkeeping and Business Prac- tice. Commercial Law and Commercial Geography. Shorthand. Typewriting. <i>Advanced Me- chanical Draw- ing.</i>

a This course does not prepare for the Normal School.

Courses of study outlined—Continued.

YEAR.	Academic.	Scientific.	Technical.	Short Technical.	Business.
THIRD.	English. Latin. <i>French.</i> <i>German.</i> <i>Greek.</i> <i>Biology or Chemistry or Advanced Physics.</i> <i>Political Economy.</i> <i>Trig'y and Surveying or History.</i>	English. <i>German or French.</i> <i>Biology or Chemistry or Advanced Physics.</i> <i>French.</i> <i>Political Economy.</i> <i>Trig'y and Surveying or History.</i>	English. <i>French or German.</i> <i>Physics or Chemistry.</i> Manual Training. Drawing. <i>Trigonometry and Surveying.</i>	The four years' shop work of the regular technical course is completed in two years.	Each year of this course is complete in itself.
FOURTH.	English. Latin. <i>Advanced Biology or Chemistry and Mineralogy or Physics.</i> <i>Greek.</i> <i>History.</i> <i>Analytical Geometry and College Algebra.</i> <i>French.</i> <i>German.</i> <i>Spanish.</i>	English. <i>German or French.</i> <i>Advanced Biology or Chemistry and Mineralogy or Physics.</i> <i>History.</i> <i>Analytical Geometry and College Algebra.</i> <i>French.</i> <i>Spanish.</i>	English. <i>French or German.</i> <i>Physics or Chemistry.</i> <i>Analytical Geometry and College Algebra.</i> Manual Training. Drawing. <i>Spanish.</i>		Students of the second year may substitute an equivalent amount of work in English and Shorthand for Bookkeeping or in English and Bookkeeping for Shorthand.

Elective studies are printed in *italics*; all others are prescribed.

A general exercise in music is prescribed for all pupils.

Drawing is prescribed for all pupils of the first and second years; also for normal-school candidates throughout the course.

Candidates for diplomas must pursue at least four studies in every year, including all the prescribed studies. Students who, from any cause, fail to meet this requirement are enrolled as "unclassified," and can not graduate until the prescribed work is satisfactorily made up.

Pupils who desire to prepare for college can make special arrangement of their courses upon written application to the principal. This must be done by pupils of the second year who elect Greek, or French of the scientific course.

CHEMISTRY.

To the pupils of the second, third, and fourth years of the high school chemistry is offered as an elective study. The course, as given, permits one, two, or three years of work in the subject, the terms "General chemistry," "Qualitative analysis," and "Quantitative analysis" outlining roughly the class of work carried on. In each year the time allotted is five hours per week, one hour per day, for the beginning pupils; one single and two double periods per week for the two advanced classes. More hours of work are, however, expected of both the qualitative and the quantitative students, as the laboratory work, which they do almost exclusively, requires no home preparation. In the beginners' classes no exact division of the time between the laboratory and the recitation room is possible; about one-half is, however, devoted to laboratory practice. The qualitative and quantitative pupils spend one period per week in the class room, the rest of the time in the laboratory.

In the first year of the course two aims are constantly held in view; first, the cultivation of habits of clear observation, correct analysis,

independent logical reasoning, and scientific exactness; second, the imparting to the pupil of chemical knowledge. As the second of these purposes can be best subserved by careful attention to the first, a modified inductive system is used, the laboratory work preceding that of the recitation room, the student gaining his knowledge at first hand as far as possible. In the laboratory, on finishing an experiment, the pupil at once submits a written statement of his work to the instructor for criticism. A definite amount of work is every day required of the class, while an extra series of parallel experiments furnishes further practice for the brighter pupils. In the recitation room the questions deal largely with the laboratory work. Classification of the knowledge acquired from the beginning, frequent written reviews, questions on the application of chemistry to daily phenomena, and problems in stoichiometry, give breadth to the course. The ground covered during this year includes the study of the nonmetals and the metals, together with elementary analysis of the first one or two qualitative groups. In the class room the text used is Storer and Lindsay's *Manual of Chemistry*; in the laboratory, the experiment sheets are prepared by the instructor.

In the second year of the course the aim is, primarily, to teach chemistry; secondarily, to cultivate deftness, accuracy, and self-reliance. The laboratory work is partly inductive, following methods devised by pupils, but amplified by the instructor. As in the previous year, a definite assignment of work is made to the class; the brighter pupils working beyond this limit obtain a fuller course. In the laboratory, on completing the qualitative tests of all the common metals, the pupil determines a number of unknown solutions. This is followed by a series of from fifteen to twenty-five estimations by "blowpipe" methods. The latter half of the year is spent in qualitative analysis, by "dry" and "wet" processes, of substances (except phosphates, silicates, etc.) soluble in water and acids. Although most of the common acids are determined, no course in systematic acid analysis is given. In the class room recitations are held once per week, at first upon the laboratory work, later (about two-thirds of the year) upon organic chemistry. Laboratory work in this latter branch has rarely been permitted, owing to the limited amount of time at command. The manuals used in the laboratory are prepared by the instructor, Fresenius's text being used for reference. The course in organic chemistry is that found in Storer and Lindsay's *Manual of Chemistry*, supplemented considerably by the instructor.

In the third year of the course, primarily, scientific methods and habits of accuracy and patience are taught. As a secondary consideration, preparation for advanced work in chemistry is also sought, since most of the pupils who elect this course wish to enter college. The greater part of the time is given to quantitative analysis, this work extending throughout the year and including approximately three-

quarters of gravimetric with one-quarter of volumetric analysis. The "Exercises for practice" in Fresenius's Quantitative Analysis have been used as the basis of the work. All determinations must come within one-half per cent of the correct value. One period per week is devoted to other work, at first to lectures and recitations on the laboratory work, later to a brief course in crystallography and determinative mineralogy, the purpose being to acquaint the pupil with most of the common ores and minerals.

DRAWING.

Though only two hours a week at most are devoted to this important branch, even in this time much is accomplished in giving pupils facility of hand, in the execution of their own work, and a broadening of the mind to an appreciation of the work of others and of the great beauties of nature.

Drawing is required for an hour each week of all the pupils in the first and second years, and for two hours a week for four years of all technical and special pupils and normal-school candidates. The special classes are a distinctive feature in the art work of the school and have proved of great service to numbers of pupils who have taken advantage of the privileges offered to fit themselves for further study in art and technical schools and for architectural and mechanical pursuits. If for good reasons a pupil desires it, drawing may be made a major study (six hours a week), each course being planned with a view to individual needs.

The course for all the classes is as follows:

First and second year regular classes, one hour a week; charcoal and pencil sketching.

Third and fourth years, normal school classes, two hours a week; one lesson figure sketching on large pieces of paper and on blackboard and one lesson in water-color painting. There are three important reasons why the study of water color is good for teachers—it is a subject they will probably have to teach; it should make it impossible for them to wear or to countenance the glaringly inharmonious combinations sometimes worn in dress, and, more than all else, there is a subtle pleasure in fine color as there is in fine music, an appreciation of which gives a higher and finer enjoyment to life.

Technical classes, two hours a week; one lesson in charcoal, that being the medium which gives the first artistic effects and trains pupils to see large masses of light and shade; first year, groups of still life; second year, casts of beautiful Greek and Gothic architectural forms; one lesson pencil sketching; first year, the study of beautiful vase forms; second year, machinery and parts of machines.

Technical classes, third and fourth years, charcoal work; more advanced study of heads, faces, hands and a full-length figure from

casts; one lesson in mechanical drawing; third year, orthographic projections, isometric projections, and perspective; fourth year, shadows in perspective and projection, development of solids and intersection of solids.

In the special classes, first and second years, the charcoal work is the same as in the technical sections, the pencil drawings being from groups of still life, flowers etc.

In the third and fourth years the special class work is elective, students continuing charcoal study of heads, faces, and full-length figures from casts; those who study color or pen-and-ink work with those mediums from groups of still life, flowers, etc.

Volunteer classes which stay after school for extra lessons are an important feature, there being one for charcoal sketching from life; another for the study of plain and fancy lettering; another for advanced work in water color, and a very enthusiastic class in composition and outdoor sketching.

Besides the actual teaching of drawing, there is much work toward the cultivation in the pupil of an appreciation of art. Numerous visits are made to the Corcoran Art Gallery, where the teacher and pupils discuss what it is that gives the value to a great work of art. These trips, though made after school, or on Saturdays, have been well attended and appreciated. Trips have also been made to the National Museum and to the Congressional Library.

In the schoolroom there have been lessons about the pictures and art objects in the drawing rooms and about the rest of the building; one most interesting talk on art work by Mr. Dunbar, the sculptor, who illustrated what he meant by working in clay as he talked; and one delightful reading of Browning's *Andrea del Sarto*, illustrated by photographs, by Dr. S. M. Newman.

MANUAL TRAINING.

The work of the year is distinguished from that of previous years by several features. In the first year the work in pattern making shows a decided advance. Guided by the experience of the few preceding years, and aided by the appointment of an experienced pattern maker as instructor, a course of work involving the more general principles of this subject was planned and carried through. Considering the fact that this was the first definite attempt to systematize the work, the results were highly satisfactory.

It was realized that the practical benefits of this advance in pattern making would be largely sacrificed unless an opportunity were found to introduce a parallel course in foundry work. The requisites were shop room and time. The former was secured by converting the forge shop into a foundry by removing the coal from the forge pans and using them for holding the sand. Benches were placed in the aisles

between each pair of forges. The purchase of the necessary tools made this improvised shop fairly adequate for the purpose. The question of time was also settled by this use of the forge shop, because it became necessary to put the foundry work in the same year with the forging. This shortened the time which can be given to the latter, and in that respect the change is to be regretted. It should be said, however, that the visible results of this curtailment of time are inconsiderable—a fact for which the instructor deserves much credit. Several reasons made it necessary to place the foundry work after the forging in the course, thus separating it from the pattern making by a very long interval, but that was unavoidable.

A third feature of the year's work, made possible by the appointment of an additional instructor, was the systematizing of the work in drawing.

The advances above noted are a source of great satisfaction to those associated with the work of this department. Heretofore there has always been the knowledge of incompleteness, of links lacking from the chain. However strong existing links were made, however well they met the educational demands put upon them, it was impossible to forget that the whole, viewed practically, was no stronger than the weakest part. Efforts can now be directed to the strengthening of this whole, to the end that it shall fulfill its double purpose of being educationally and practically valuable, as emphasized in last year's report. It is not necessary now to say that satisfactory results in both directions can not be attained until the new building, now assured, is occupied.

The number in the regular technical course was smaller than last year, owing to the fact that those who enrolled in the new two-year course were nearly all drawn from it. The new course has fairly met the expectations of its promoters, considering the unusual conditions surrounding its first year. The aim is not so much an arbitrary standard of attainment, fixed to correspond to the ordinary high-school standard, as to give the individual student all he can assimilate while here.

Referring to the shop work in detail, it may be said that, except for the change noted in the first and second year courses, there was no departure from the lines heretofore followed. In the former considerable attention was given to vase forms with good results. The ornamental wrought-iron work of the second year shows a decided gain, especially in design. The execution was fully up to the usual standard of that department. In the third and fourth year, in the machine shop, however, quite a different trend was given to the work. Instead of building a class project, a machine, the effort was put upon the production of small tools of considerable variety in size and kind. These included twist drills, reamers, arbors, milling-machine cutters, and inside and outside spring calipers. The necessary degree of accuracy

was secured through the use of micrometer calipers. It is believed that this kind of practice has been of great value to the students.

The drawing of the first year has remained as heretofore, the aim being to give a good grounding in the knowledge of practical working drawings and facility in producing them, including plain, free-hand lettering. In the second year the way was paved to the general subject of projection by a course involving work with points and with limited lines, surfaces, and solids, all examples introducing familiar geometrical forms. A second style of letters was taught and numerous shop drawings, especially of forged work, were executed. The third-year work was a somewhat rigid course in projection, which dealt with general cases, and was thus designed to develop the student's power in the subject. The results of this course were quite satisfactory, although better are expected another year from those who have done the second-year work above indicated.

Respecting the new building, it is a cause for congratulations that the change in plans necessitated by the crowded condition of the Central will give this entire department a permanent home of its own much sooner than was expected.

Number of boys: First year, 83; second year, 64; third year, 31; fourth year, 8. The numbers taking the different kinds of work were as follows: Wood turning and pattern making, 81; forging, 77; machine work, 49. These figures represent the average enrollment for the year. The total of this enrollment was 186.

CIVIL GOVERNMENT AND POLITICAL ECONOMY.

The course in civil government and political economy is arranged to give about one-half year's work to each subject.

Prof. John Fiske's *Civil Government in the United States* is used as a basis for the development of the work in civil government, which proceeds upon the following lines:

The necessity and purpose of government in general.

The history of government among Anglo-Saxons, briefly.

The several units of local government in our country and their character and development, intensively and extensively.

The causes, character, and effectiveness of city governments.

The history of our colonial governments and their development into States.

The National Government.

The United States Constitution:

Its antecedents.

Magna Charta.

Bill of Rights.

Articles of Confederation.

Formation.

The history of the constitutional convention.

Work of the constitutional convention—the Constitution (studied).

Operation.

Throughout there is constant comparison of the form of government studied with others, and an examination of the practical accomplishment of the particular form under consideration. The idea is to make the pupil feel that the intangible and mysterious things of government are a very real every-day matter, to be known, appreciated, and dealt with in the most intelligent and effective manner.

The following works are useful in the collateral reading of the class:

On the units of local government, Howard's *Local Constitutional History of the United States* is especially helpful.

On the colonial and State governments, the well known larger histories of the United States, particularly Justin Winsor's *Narrative and Critical History of the United States*, the last edition of Bancroft's *History of the United States*, American Commonwealth Series, Dole's *Talks About Law*, and Bouvier's *Law Dictionary*.

On the national Constitution and its operation, Fiske's *Critical Period of American History*, Bancroft's *History of the United States*, Curtis's *History of the United States Constitution*, Bryce's *American Commonwealth*, Macy's *Our Government*, Wilson's *The State*, and histories of our constitutional period to the present time.

Dr. Charles J. Bullock's *Introduction to the Study of Political Economy* has proven a very acceptable help in outlining the work of the class. The subject was treated much after the lines laid down by the author, whose work seeks to arouse the pupil to the character of the study by showing what the nature and extent of our nation's wealth is and how it has been and is developing. From the consideration of the special case it proceeds to the consideration of the general conditions and principles which govern the material welfare and progress of humanity, constantly using surrounding circumstances for illustration or verification of the truths taught. As far as possible, the class is led to investigate actual cases of industrial conditions. The preparation of the lessons is not confined to the text, but pupils are required to read collaterally such other works as Mill's *Political Economy*, Walker's *Political Economy*, McVane's *Political Economy*, Ely's *Outlines of Economics*, De Laveleye's *Political Economy*, and Lalor's *Cyclopedia of Political Economy*. Much help is also to be had from Hadley's *Economics*, Jevon's *Theory of Economics*, Ely's *Taxation*, Clarke's *Philosophy of Wealth*, and Walker's *Wages Question*.

The work in class is usually conducted in the way of a general discussion of the topics assigned, with the idea of presenting the matter from every possible standpoint, and so giving to the pupils the broadest understanding of the problem under investigation.

A general summary of the work as treated in the class follows:

- The economic history and conditions of the United States.
- The causes of the production of wealth—consumption.
- The production of wealth.
 - Factors—their organization.
 - Cost of production.
- The theory of exchange.
 - Basis of exchange—value.
 - Medium of exchange—money.
 - Monopolies—monopoly values.
 - International values—international trade.
- Distribution of wealth.
 - Interest.
 - Rent.
 - Wages.
 - Profits.
- The wages contract and its results.
- Socialism.
- Theories of economic functions of government.

BIOLOGY.

Biology is offered as an elective study to all pupils of the third year. The course as given, however, extends through the third and fourth years, and when once elected, must be completed by normal school candidates. The aim of the course is primarily to afford that peculiar mental discipline which can come only from the study of a natural science, and secondarily to put the pupil in possession of a certain amount of information upon biological topics.

To secure these results one method of teaching, and only one, is effective. Biology must be studied in the laboratory and in the field as well as in the class room. The student must be required to find out for himself, and up to the limit of his ability to do original work. He must be made to feel that he can learn by his own efforts and that for successful investigation he must himself get to the bottom of a question.

EQUIPMENT.

For such work as that indicated in the preceding paragraph the three high schools of this city in which biology is taught (Central, Eastern, and Western) are well equipped. Each has a commodious and well-lighted laboratory, in one case specially planned for biological work; in the others sufficiently well adapted to meet all ordinary requirements. The permanent fittings, the movable furniture, tables, chairs, aquaria, etc., are of the regulation laboratory styles. The outfit of apparatus in each laboratory includes a number of compound microscopes (Bausch and Lomb, AAB., Central 24, Eastern 16, Western 12), paraffin bath, microtomes, a full supply of glassware, the apparatus and reagents for performing the ordinary experiments in animal and plant physiology, and a laboratory reference library. Arrangements

have been made by which an abundant supply of live or preserved material for work is constantly on hand, and in each school there is a rapidly growing collection of typical forms of animals and plants for comparative work on any group. The collections of the local fauna and flora have assumed already considerable proportions, and contribute no little toward inciting and holding the interest of pupils.

TIME.

The amount of time given to the study of biology is five school periods a week for two years (the third and fourth of the high-school course). In the first year the work is in general biology, the aim being to give the pupil a broad knowledge of the animal and vegetable kingdom and a firm foundation for the more advanced and specialized work which is to follow.

In the second year the pupil is allowed to choose between botany and zoology and to devote an entire year to his favorite science.

METHODS.

At least four of the five periods of each week are spent in the dissection and examination of living or preserved specimens in the laboratory under the immediate supervision of the teacher. For this the availability of live material has been constantly kept in view while planning the work. Usually one hour a week is devoted to a lecture or to a recitation requiring home preparation on the part of the pupil. An accurate record of all laboratory work, lectures, and other exercises is kept in specially designed notebooks which admit of the rearrangement of papers according to any plan of classification. Comparisons are constantly called for, and without going into the details of the subject a general knowledge of relationships and classifications is required. In the latter part of the first year and throughout the second year practice in the identification of species of both plants and animals is given as a part of the regular class work.

COURSE OF STUDY.

The following outline will show the approximate order in which the work is taken up and the amount of time given to each portion of it:

First year—Biology.

Laboratory guide, Boyer's Elementary Biology.

First to fourth weeks, inclusive.—Study of the Crustacea.

Type, the crayfish (*Cambarus affinis*). Observations on the live animal to determine the habits, food, methods of locomotion, etc.

Examination of the external structure, with a view to working out the segmented plan of the body and the homology of the appendages.

Examination of the internal organs. The relations of the system of organs to one another; comparison of the crayfish and one of the higher animals based upon the pupil's knowledge of human physiology; comparison of a number of crustaceans (sow bug, crab, sand flea) with reference to the external character.

Instruction in the use of the compound microscope and in laboratory methods in general.

Fifth to eighth weeks, inclusive.—Study of the Insecta.

Type, the Locust (*Acridium americanum*). Examination of the external structures, comparing with similar parts of the crayfish.

Comparison of other insect types (beetle, butterfly, etc.).
And by the same methods.

Ninth week.—Study of the Protozoa.

Type, *Amæba* or *Paramæcium*.

Tenth week.—Study of the Porifera.

Type, the simple sponge (*Grantia* sp.).

Eleventh week.—Study of the Cœlenterata.

Type, fresh-water *Hydra viridis* or *H. fusca*.

Twelfth week.—Study of the Echinodermata.

Type, starfish (*Asterias* sp.).

Thirteenth week.—Study of the Vermes.

Type, the earth worm (*Lumbricus* sp.).

Fourteenth week.—Study of the Mollusca.

Type, the clam (*Venus mercenaria*).

Fifteenth to twentieth weeks, inclusive.—Study of the Vertebrata.

The dissection of the fish and bird, with a careful general comparison of skeletal characters of the fishes, batrachians, birds, and mammals.

Twenty-first week.—Study of the Protophyta.

Type, *Protococcus* or *Pleurococcus*.

Twenty-second to twenty-sixth weeks.—Study of Algæ.

Types, *Oscillaria*, *Spirogyra*, *Vaucheria*, *Nitella*, *Fucus*.

In this and following studies practice in the identification of genera and species is introduced.

Twenty-seventh and twenty-eighth weeks.—Study of Fungi.

Types, mold, lichen, toadstools.

Twenty-ninth and thirty-first weeks.—Study of the Bryophyta.

Type, *Marchantia*.

Comparison of a moss plant (*Hypnum*).

Thirty-second to thirty-fifth weeks, inclusive.—Study of the Pteridophyta.

Type, a fern (*Pteris* or *Pellaea*).

Comparison of a club moss, horsetail, etc.

Thirty-sixth and fortieth weeks, inclusive.—Study of Spermatophyta.

Thirty-sixth and thirty-seventh weeks.—Study of the pine tree and other conifers.

Thirty-eighth and fortieth weeks.—Study of flowering plants.

Second year—Zoology.

Text, Kingsley's Comparative Zoology.

1. CRICKET (one week).

Specimens to be collected by the pupils and identified as far as possible by the books in the reference library.

Compare carefully with the grasshopper, mantis, roach, and walking stick.

2. BUTTERFLY (one week).

Compare larva, pupa, and imago. Make careful drawings of each. Answer the following questions.

For the larva:

How is locomotion effected? Illustrate by diagram.

How does it feed? Make records and drawings.

How does it change into the pupa?

For the pupa:

How is it protected and against what?
What evidences of vitality are shown?

For the imago:

What external organs can be homologized with parts of the larva and pupa?
What organs of locomotion are found and how are they used?
Relative size of the pairs of legs; same of wings.
Compare moths and butterflies.

3. BEETLE (one week).

Study of alcoholic specimen. Make full drawings of all the parts; study of live beetle; weigh the insect carefully, record; fold a small square of paper into a box and by means of a thread and wax, fasten wagon-like to the beetle, pour shot into the box until the weight is just great enough to stop the beetle; weigh the shot and compare with the weight of the insect. How great a weight can a man pull along the smooth ground?

4. HOUSE FLY (one week).

Observations on living animal from directions given by teacher. In this week review the whole subject of the Insecta.

Drawings:

- (1) Imago, dorsal view, wings in place.
- (2) Same, left side, showing spiracles, wings removed.
- (3) Front view of head with antennæ.
- (4) Egg of fly.
- (5) Pupa, showing all the parts.

5. SPIDER (one week).

Keep a live spider in a small jar, feeding it upon flies, plant lice, etc. Record observations (made while doing the work outlined below) as to web spinning, taking of food, etc. Draw spider and web. From a large dead specimen draw—

Dorsal view of head, $\times 10$, name parts shown.

Whole animal, ventral view, $\times 5$.

Whole animal, side view, $\times 5$.

Study related Acerata, Limulus, Buthus, and some Phalangid.

6. MYRIAPOD (one week).

Study of the living animal after directions given by the teacher.

Drawings:

- (1) Dorsal view of the entire animal.
- (2) Head, ventral view, showing all the parts.
- (3) Head, dorsal view.
- (4) Two consecutive segments, left lateral view, showing legs and spiracles.

In this week review the subject of the Arthropoda and prepare a classification defining the Crustacea, Acerata, and Insecta, and under the latter the subclasses as far as given in text-book.

7. PARAMÆCIUM (one week).

Protozoa in general. Draw several species of Foraminifera.

Observations on living Paramecium after directions given by teacher. Draw whole animal, showing all the characters.

8. SPONGES (one week).

Dissection of the fresh-water sponge (*Spongilla*). Laboratory directions in Boyer's Elementary Biology. Examination of spicules and the horny skeleton of other sponges. Review of Grantia.

Article in Scribner's Magazine, November, 1894, on "Sponge and spongers of the Florida Reef."

9. CÆLENTERATES (two weeks).

Study of Aurelia, Pennaria, Astrangia, and Metridium, comparing carefully with Hydra. Laboratory directions for Pennaria in text-book.

10. SEA-URCHIN (two weeks).

Comparing an Ophiuran, Holothurian, Asteroid, and Crinoid.

Review the starfish and dissect a sea-urchin, carefully comparing the two externally and internally; compare types of the other classes for external anatomy. Make a drawing of each.

11. WORMS (one week).

Planarians and tapeworms. Examine, if possible, a liver fluke or other parasitic flat worm. Examine a planarian worm and compare as many types of worms as can be obtained.

12. SLUG AND SNAIL (two weeks).

Observations on living animals after directions given by the teacher. Examine and draw the large garden slug (*Limax*).

(1) Dorsal view, showing all the parts.

(2) Right lateral view.

(3) Front view.

Study of allied forms, *Helix*, *Physa*, etc.

Compare and draw the chambered nautilus, *Chiton* and *Scaphopod*.

13. DAPHNIA, CYCLOPS, BRANCHIPTS (one week).

Observations on the living animal, after directions given by the teacher.

Study and draw (using the compound microscope) individuals of each group (*Cladocera*, *Copepoda*).

14. CRANGONYX OR GAMMARUS, ONISCUS (one week).

Observation on the living animal. Methods of locomotion.

Movements of appendages.

Care of young. Food.

Alcoholic specimens (substitute a large form).

Draw: Whole animal, $\times 2$ —side view. Chelipeds, $\times 10$. Abdominal appendage, $\times 10$.

Repeat work given above with *Oniscus* as a representative Isopod, and, in addition, draw—

(1) Dorsal view.

(2) Head, ventral view, showing mouth parts.

15. DEVELOPMENT OF FROGS' EGGS (two weeks).

Compare larval frogs and salamanders.

Compare adult frogs and salamanders.

Compare larval frogs and adult salamanders.

Draw—

A bit of spawn with a few eggs in place.

Single eggs in various stages.

Series of tadpoles, showing metamorphosis.

Keep careful records of the time of each stage.

16. SHARK AND SKATE (two weeks).

Compare with fish.

Study carefully the fin structure and the skeleton.

Draw—

(1) Shark and skate, dorsal and ventral view.

(2) Shark, left lateral view.

(3) Pectoral, ventral and caudal fins.

(4) Shoulder girdle of shark.

(5) Shoulder girdle of perch.

17. SNAKE, TURTLE, LIZARD, ALLIGATOR (two weeks).

Compare carefully for external characters. Make for each of the types the following drawings:

(1) Entire animal, dorsal view.

(2) Dorsal view of head.

(3) Left side of head, mouth open, tongue exposed.

(4) Fore and hind foot of left side.

18. BIRDS (five or six weeks).

By the use of the skins in the high-school collection learn to recognize the more important orders of birds. Identify at least 25 species of common native birds, keeping a careful record of the characteristic marks of each.

19. MAMMALS (eight weeks).

Dissection of some small mammal.

Careful study of the skeleton of man and comparison with that of the type dissected.

Draw—The more important bones of the human skeleton. The same bones of some other mammal.

Second year—Botany.

Text-books and laboratory guides, Bergen's Elementary Botany and McDougal's Plant Physiology.

First and second weeks.—Seeds and spores, and hence fruits; independent and class work. Study of mechanisms, etc., for the dispersal of seeds and spores of all available plants. (Bergen, Chap. XIX-XX.) Also determine available plants, having in view the variations occurring under the preceding topic.

(During the remainder of the year at least two hours' laboratory work each week should be devoted to the classification of available material and the study of organographic characters by Bergen, Gray, Britton, Brown, and others.)

Third and fourth weeks.—The seed and its germination; the parts of the seedling, their development. (Bergen, Chaps. I, II, III.)

Fifth, sixth, and seventh weeks.—Roots and their structure, function, etc., experiments to illustrate the absorption of liquid nutriment. (Bergen, Chap. IV; McDougal, experiments 1, 8, 16, 17, 19, and such others as the time will permit.)

Eighth to thirteenth week.—Stems, their structure and physiology. (Bergen, Chaps. V, VI, and VII; McDougal, experiments, 24, 27, 29, 30, 32.)

Fourteenth to twenty-third week (inclusive).—The structure and physiology of buds and leaves. Experiments to illustrate absorption of gases, respiration, and irritability. (Bergen, Chaps. VIII, IX, X, XI, XII; McDougal, experiments, 43, 44, 46, 47, 49, 51, 52, 53, 54, 57, 59, 61, 66, 68, 75.)

Twenty-fourth and twenty-fifth weeks.—Inflorescence, independent work in the field. (Bergen, Chap. XIV.)

Twenty-sixth week.—Morphology of typical flowers. (Bergen, Chaps. XV, XVII.)

Twenty-seventh, twenty-eighth, and twenty-ninth weeks.—Fertilization. (Bergen, Chap. XVIII.)

Thirtieth week.—The struggle for existence. (Bergen, XXI.)

Thirty-first week.—Growth. (McDougal, chap. 6, with such experiments as are deemed best by the instructor.)

Thirty-second to thirty-fifth week.—Review of types, independent anatomical and systematic work.

Thirty-sixth to thirty-ninth week (inclusive).—Individual work on available material.

ENGLISH.

The high school of Washington is compelled to meet the difficulty which all schools face, the habitually loose, careless expression of the great body of pupils. This condition exists because in the street, in the home, too often even among those whose business is education, the thought is loose and obscure. The attempt of the high school is to overcome this tendency, to arouse in the pupil a desire to use not "fine

English," but correct, adequate expression, commensurate in dignity with worthy thought. That this ideal has not yet been attained goes without saying, but it is encouraging to be able to report progress made.

It is believed that the teaching of English has two great objects: the clear, correct expression of thought, which demands clear, correct thinking, and the appreciation of the best in literature, which is the best in thought. These two are never separated in the course, because of the belief that the second furnishes most delightful material for the first. With the certainty that the first of these is the fundamental necessity of all education, that the attainment of it is the test of all successful teaching in all departments of study, that the English teacher in giving to the pupil an appreciation of the fundamental but simple laws governing thought gives him the chief tool for the successful accomplishment of his work in all lines of study, the English course has been planned.

Four hours a week during three and a half years are given to English, but by careful correlation of history, by the thoughtful cooperation of teachers of science and the languages, the opportunity for practice in the application of the principles is greatly enlarged, the general utility of the study demonstrated, and a corresponding increase of interest aroused.

If the pupil is to express himself clearly and correctly he must understand the simple units of discourse, the sentence and paragraph; accordingly, the work of the first quarter is devoted to the study of these two. No attempt is made to analyze the sentence for the sake of analysis, but, from the text chosen, sentences are studied with reference to the relation between the thought and the form, until the pupil knows that thought controls form, until he knows that the mere use of the coordinate conjunction between two thoughts can not make a compound sentence, that he can not change a correct compound sentence into a correct complex sentence without changing the idea expressed. In the study of the sentence from this point of view the entire subject of relation words is dealt with. The pupil is taught that certain relation words mean certain things, hence must be used intelligently. He is required to put this knowledge to use in oral and written work which is criticised entirely from the correspondence of form with thought. The pupil who says, "Zebek Dorchi was a bold intriguer, and he led the Tartar tribe to revolt," is not permitted to go in peace. He may call this a compound sentence. No one interferes with that at first, but he is sent back to his thought, left there until he sees that these are not independent thoughts of equal value, therefore can not be expressed correctly in compound form.

By analysis of carefully selected paragraphs from the text, the principles governing paragraph structure are established. It is here that the most valuable work is done. The pupil learns that conveying thought to another is a matter capable of being governed by positive

principles, as simple as good common sense. About what is he to talk? What is he to say about it? How much is he to say about it? How should these points be arranged? It is necessary to know these things if he is to tell the story of a trip up the river, or describe the Washington Monument. It is necessary to know nothing more if he is to discuss the Peloponnesian war, the force pump, or the manufacture of ice; necessary to know no more if he were to write a history of the nineteenth century. In the simplest manner in the world he takes the names of these laws: Unity, selection, proportion, method. Their conscious application to every recitation the student makes, on no matter what subject, should be required, for only by conscious practice can he acquire the habit, and only when the habit is fixed is he studying any subject intelligently. When he knows that every well-constructed paragraph is the development of a single topic, that every sentence which does not relate to that topic is useless, he readily grasps the different forms of paragraph. There is no mystery here. A 14-year-old child has no difficulty in seeing that the paragraph which tells a story differs in certain particulars from that which describes the Washington Monument, or proves that football is beneficial. It was the custom of former years to defer the study of these forms of composition till later in the year, but the need for them in both history and English at the outset made it wise to study them in their simplest form, the paragraph, during the first quarter of the first year.

On the side of expression there is absolutely nothing but the amplification of these principles by application to increasingly wider fields of study during the four years. The details of the plan are changed from year to year as experience shows the inadequacy of certain efforts, but the belief in the great fundamental principle that correctness of expression comes from intelligent application of certain laws of thought changes never.

During the first year more formal study is given to narration, description, and simple exposition. In the second year argumentation is studied in its simpler phases. During the remaining years all forms are used, as the nature of the subject demands, and during the entire course there is constant, careful criticism of oral as well as written work, entirely from the standpoint of adequacy in expression of correct thought, with greater and greater insistence that the thought shall keep pace in value with the increasing maturity of the mind.

The feeling has often been expressed that there must be great formalism, a great coldness, in the work—a loss of sympathy with the literary side—since it is insisted so urgently that a pupil shall have some reason for the faith that is in him when he voices his faith, and that his form shall plainly show this in all recitations, whether discussion of character or narration of the most touching story. In the hands of a machine teacher there is danger. In her hands the inspirational method is dangerous beyond words. The best proof that formalism does not prevail is the daily recitation. No child can tell the story of

Little Nell acceptably who has not been led to feel the tenderness and pathos with which Dickens has created her. The descriptions of Elaine and Guinevere, Lancelot and Galahad—the pictures of the dim, rich city and the flaming brand—bear witness to the appreciation of the magic beauty of Tennyson's art, and the annual desire to play Merchant of Venice and give Dickens's tableaux shows that there is a very lively interest in the subject-matter, while some of the paragraph work of the fourth-year classes in subjects of general interest—football, the track meet, the accident on the street, or in the market—show that the constant practice of knowing what is to be said and how to say it has not been waste of time and suffocation of genius. In fact, "English" is very much alive, both in expression and interpretation, and pupils realize that as a study it is not a mere device for the torture of young minds.

Three years ago, instead of adhering to the old plan of sending each quarter to the teachers of the different years the work to be done in that year for that quarter, it was deemed wise to place in the hands of all English teachers a complete outline of the course for four years, in order that each teacher might have before her the entire scope of the work, its purpose, and the details of execution of that purpose, that each might know exactly what she was expected to accomplish in carrying out the general scheme and how much each year should give to the succeeding one. This printed plan contains not only the outline, but suggestive details, which are amplified in department meetings and in conference with the individual teacher. The results are greater uniformity in the work of the four schools, ampler material for comparison of results, and the greater enthusiasm that comes from discussion of principles by a body of earnest workers.

The pupils, while far from approaching the standard set for them, show encouraging improvement in their power to think and talk intelligently and in ability to write in a sensible, interesting manner on any subject reasonably within their appreciation. In the years to come it is hoped that improvement in these lines will continue and that the daily use of English that is not only correct, but in some degree really good, may be found.

The work of the English department for 1898-99 has been carried out on the lines indicated in the foregoing report.

Experience has proved the wisdom of devoting much time to the study of the paragraph in the first quarter of the first year, the beneficial character of the work manifesting itself in increased power to deal with small units in all branches pursued during the year.

The papers submitted during the year show improvement over those of previous years in certain particulars. The narrative of the first year has less stiffness and, when based on the text studied, shows a keener appreciation of the characters involved.

The descriptions, based largely on the poems studied, show a less

pronounced use of the poetical adjective, which has so often in past years given to this special form of composition the appearance of attempted fine writing which is not good prose. The critical work throughout is less mechanical, and indicates a desire on the part of the pupil to be quite sure of his subject before he ventures his assertions. As a result, while there is too much diffuseness, there is really less padding and a more honest attempt to say simply the thing worth saying.

In the year to come special emphasis will be placed on this phase of the work, for here is the best opportunity given by the schools for the correction of the habit of specious sounding, but really meaningless, comment.

Appended is the course, with omission of details.

Purpose:

- (a) Clearness of thought.
- (b) Clearness and correctness of expression.
- (c) Familiarity with the work of the great masters of thought and expression.
- (d) Development of intelligent appreciation of good books.
- (e) Sufficient knowledge of the history of literature to make a proper setting for the works studied.

FIRST YEAR—FOUR HOURS A WEEK.

First quarter.

Purpose: Study of the sentence and paragraph as the means of expression.

Text: De Quincey's *Revolt of a Tartar Tribe*.

Study paragraph structure. Analyze for position and development of topic sentence; study with care the relation of sentences with one another, with topic sentence; study the structure of the sentence—simple, complex, and compound—with special reference to the value of each in clearness of expression of thought. Note the position, arrangement, and connection of elements for the same purpose. Make complete study of connectives; those that connect elements; those that show relation between sentences. Compare loose and periodic sentences, long and short, with reference to clearness and force. Study choice of words. Impress the truth that the laws of selection and method apply first of all to the sentence. Require constant practice in sentence making. Study the kinds of paragraph, narrative, descriptive, expository, argumentative, making careful study of the relation words belonging to each type of paragraph; with this give daily practice in paragraph making, both oral and written; criticise for selection and arrangement and for sentence structure.

Second quarter.

Composition, simple narration, and description, with stress on narration.

Work studied: Dickens's *Tale of Two Cities*.

Contemporaries: Thackeray, Trollope, George Eliot, Charles Reade, Wilkie Collins.

Assign the book as a whole to be read before any work based on it is taken up. During the two weeks required for this reading, plan the eight recitations so that no preparation outside of class is required.

With a good short story, take up the points made on pages 70–75 of the *Paragraph and Theme Pamphlet*.

Enforce the law of selection, making sure that pupils really see that only vital topics are selected. Give them Hopkinson Smith's law that the good short story

should be reducible to a dinner-table anecdote of three minutes. Outline the story read and apply the three-minute test. Give a second story and require outline from pupils without previous comment by teacher or class. Criticise for selection and arrangement. Require outline for original narration from pupil's experience. Require short original narration—criticise for outline and sentence structure. After this assign selection of the different stories from *Tale of Two Cities*. Work with the class on outline of the bare story of Lucie and Darnay. Require the work to be unaided on the stories of Dr. Manette, Madame de Farge, Sidney Carton, and any others desired. Impress the idea of purpose as governing selection and arrangement.

From these outlines require both oral and written narration, criticising carefully the sentence structure. Guard against commonplace embellishment and sentimentality.

Third quarter.

Composition: Narration, description, comparison and contrast, emphasis on description.

Assign the poems in the order of development of the Arthur story: Coming of Arthur, Elaine, Holy Grail, Guinevere, Passing of Arthur. These are to be read simply for the general points of the Arthur story, except Elaine, which, after the first reading, is to be studied in detail.

Fourth quarter.

Composition, narration, description—exposition.

Texts: Ancient Mariner, Selected Poems of Wordsworth, Eve of St. Agnes, Selected Poems of Shelley, "Prisoner of Chillon."

Brief sketches of Wordsworth, Coleridge, Keats, Shelley, Byron, Scott, and Macaulay.

Very little written work should be based on the poems of the quarter. Study them solely with reference to the thought and the beauty and truth of the expression, requiring constant memorizing of beautiful passages. "There can be no more useful help for discovering what poetry belongs to the class of the truly excellent, and can, therefore, do us most good, than to have always in one's mind lines and expressions of the great masters."

The special emphasis in composition is to be placed on exposition.

Through the entire year clearness of thought and correctness of expression are the first considerations. The eternal question must be, "What do I actually think about this?" "Does my language express just that thought?" In making any outline the question is, "What is my purpose?" That once settled, selection, arrangement, and proportion are good or bad with reference to the development of that purpose. The teaching in this matter of purpose, selection, proportion, and arrangement should be so logically done that pupils may be able to take any unit within their comprehension, break it into principal and subordinate divisions, and discuss it intelligently. The development of this power in the student is never to be lost sight of from beginning to end of the course. In composition the oral work is as important as the written. Every recitation is a paragraph isolated or related, and should be criticised accordingly. In addition to written work prepared at home, much should be required in class. In all work unity of thought, correct spelling, punctuation, and capitalization are the tests.

SECOND YEAR—TWO QUARTERS—FOUR HOURS A WEEK.

Composition, argumentation.

Texts: Merchant of Venice, As You Like It, Twelfth Night, Burke's Conciliation.

Assign first reading of play for: (1) general story; (2) structure; (a) structural point of each act; (b) development of structural point by scenes; (c) the stories of the play—major, Casket and Bond; minor, Jessica and Ring, use and development of each; complication, climax, disentanglement.

Assign second reading for study of characters and actions, all points made with reference to these to be proved by text. In this study all forms of evidence are used, and care must be taken that the pupil is sure of the meaning of the point made and the applicability of the evidence to the point. In studying text for character and actions require the memorizing of finest passages cited as evidence.

Study the play for its beauty of words, figures, music, its power of arousing thought.

The general method for the collateral plays is the same as for this, but with less time devoted to details of each. Select special points for emphasis in the study of each and adhere to the plan.

Analyze Burke's speech on Conciliation for kinds of proof.

(1) Read speech for main outline. (2) Analyze main divisions for the principal propositions. (3) Analyze arguments used to sustain main propositions. Discuss the kinds of argument with such care that the students are clear as to their use and comparative value. Require application of these arguments to original work as soon as discovered. Constant written work is here the best test. (4) Reduce entire speech to most condensed form by use of results of (1), (2), and (3). The work of (2) and (3) demand careful study of paragraph structure. (5) Study selected portions, as the analysis of American love of freedom, of Wales and Chester, for force and clearness, noticing how admirable is his use of words, figures (climax and antithesis), and sentences. Study selected passages as illustrative of Burke's fine sarcasm. (6) Give frequent practice in application of arguments to original propositions on questions of immediate interest to pupils.

The need of a carefully prepared outline for every argument can not be overestimated. Require briefs of arguments upon topics not developed into essays.

THIRD YEAR—FOUR QUARTERS—FOUR HOURS A WEEK.

Composition: Weekly themes based on study of literature; narration, description, comparison, argument, exposition.

Texts: First quarter, Chaucer's Prologue; second quarter, Hamlet; third quarter, Macbeth; fourth quarter, Milton's Minor Poems, Books I and II of Paradise Lost.

History of literature from the Beowulf to Dryden, Stoppford Brooke.

In the third year the work broadens in scope. The student is familiar with the different forms of composition. He has studied the laws of rhetoric as applied to these, has learned how to approach the work of an author, and is familiar with the use of the library. He should study now the development of the literature and language. He should be able to criticise more intelligently the works read, to discuss the criticisms of others with an appreciation of the point of view from which the criticism is made, and, perhaps, to produce work which shall be something more than indifferent thought in correct language.

The written work must be weekly, with careful criticism of unity, selection, and arrangement. The daily oral work requires the same careful attention.

First quarter.

Three weeks devoted to review of kinds of composition, with daily written work.

In Chaucer, read at first for the poetical quality, the meter, and the music. Assign at first but few lines, taking up carefully the new points in inflection and pronunciation, requiring the law for every form. The introduction gives all the help needed for an understanding of grammar and meter.

One of the most valuable exercises in expression, both in choice of words and structure of sentence, is translation. For this Chaucer offers abundant material. This is the one opportunity of the English teachers to work in translation with all pupils. In its helpfulness to the teachers of language as well as to pupils it can not be overestimated. Permit no pupil to translate by simply putting the modern

English equivalent in place of the old English word. Require the exact shade of thought, but in modern construction. Cultivate a habit of really good sentence structure. Require the observance of the laws of selection and arrangement, even where it changes the order of the poem. The translation is prose and should observe the laws governing prose.

Require the pupil to analyze the poem for himself, discovering the man and the times in the work without constant questioning.

Analyze the elements in the language, then assign the history of the development of English. This development is to be noted through the work of the entire year.

The history of literature should cover the ground from the Beowulf to Chaucer. Select only the most important points for assignment and plan the lessons so that this may fall into its proper subordination.

Second quarter.

Detailed study of Hamlet; collateral reading of Romeo and Juliet.

First reading of play for: (1) general story; (2) structure. See outline of second year for suggestions on 1 and 2.

Take next the study of character, which requires many readings of play. Study characters as wholes, not in single scenes or acts, but trace growth through each scene and act. Study effect of character on action and action on character, the influence of character interplay. Require constant proof from text that there may be no vamping criticism on the model of Mrs. Jameson. Stevenson says, "Man is a creature who does not live upon bread alone, but chiefly by catchwords." Nowhere is greater care needed to guard against catchwords than in a recitation on character.

Require pupils to memorize speeches which show the thought of the characters at crises in the play.

Study text for beauty of word and phrase, for figures, music and rhythm, requiring the memorizing of many passages.

Study words only as far as necessary to a clear understanding of the meaning.

Discuss all points in character and meaning of play, first from the pupil's own interpretation of text. Then take up the criticisms of Dowden, Schlegel, Ulrici, etc., with the closeness of analysis of an argument, comparing them point by point with each other and with the analysis made by the pupils, using text constantly as proof. Even the professional critic finds it temptingly easy to string together adjectives or to make careless assertions from insufficient evidence.

Third quarter.

Detailed study of Macbeth; collateral reading, Julius Cæsar, Othello, and King Lear.

In the third quarter the work is less detailed. Plan from the beginning to read each play for certain definite points, that the work may not be hurried and lacking in unity at the close of the quarter.

Be sure that every recitation a pupil makes, every paragraph he writes, shows clear thinking. Sentences correct in structure may mean nothing.

The history of literature in the second and third quarters covers the period from Chaucer to the seventeenth century, special attention being given to the rise of the drama and the work of the dramatists.

Fourth quarter.

The special work of this quarter is the study of Milton's Minor Poems, with collateral reading of Books I and II of Paradise Lost. The history of literature covers the seventeenth century, but has for its chief interest the poets of the latter part of the sixteenth and those of the seventeenth century.

FOURTH YEAR—FOUR QUARTERS—FOUR HOURS A WEEK.

Composition: Themes based on (a) literary study of the year, for development of critical power; (b) experience of the pupil, for development of creative power.

Texts: Essay and prose fiction.

History of literature; review from the Beowulf to eighteenth century; advance from eighteenth century to present.

The work of the fourth year deals with prose. As the prose of the nineteenth century is largely of two classes, the essay and the novel, the development of these two forms has been chosen as the unit of study.

The essays for class study are Bacon's Essays, Addison's Sir Roger de Coverley papers, Lamb's Essays of Elia, Carlyle's Burns, De Quincey's Flight of a Tartar Tribe.

To leave the essay with the study of these authors is to omit a feature essentially modern and valuable. The teacher should, therefore, read in class and discuss with pupils selections from Stevenson, James, and Lang for that peculiar charm of phrase which is lacking in the earlier essayists.

The texts in fiction are selections from Malory's Morte d'Arthur, More's Utopia, Sidney's Arcadia, Lyly's Euphues, Bunyan's Pilgrim's Progress, Defoe's Robinson Crusoe, Richardson's Sir Charles Grandison, entire texts of Goldsmith's Vicar of Wakefield, and George Eliot's Silas Marner. In addition to this each pupil must report on one of the novels of Miss Edgeworth, Miss Austen, Scott, Thackeray, and Howells or James. There is always in class a minority that has read the younger moderns and is delighted to report on them.

BUSINESS ENGLISH.

The pupil who would excel in any subject requiring expression of thought, either spoken or written, must have at his command the proper terms and must also know the best and most effective means of using these terms. This efficiency can be gained only by careful, systematic study and constant practice. Our aim is, therefore, so to graduate our work that this thorough knowledge may be acquired and the pupil really become master of a crisp, clear method of thought and expression, which shall not lack the elements of grace and beauty.

With this intention the work begins with a careful study of the paragraph as a unit of thought and the sentence as the means of its development. This includes a study of the elements of the sentence, their position as compelled by the thought to be expressed, and their proper connection and subordination in the sentence; also a similar study of the sentence in the paragraph, emphasis being given always to clearness and force of expression. Here, also, punctuation is carefully reviewed as the pupil is almost daily required to do written work.

Types of the paragraph are next considered, i. e., narrative, descriptive, argumentative, and expository, each being analyzed for development of topic and selection and arrangement of thought. This study occupies the first quarter of the year and is based upon Macaulay's Warren Hastings or De Quincey's Revolt of a Tartar Tribe.

From the paragraph as a unit the study is extended to the connection of paragraphs in a narrative, beginning with short stories, reproduced, then extending to original short stories, and finally to a more extended and elaborate effort, generally selected from several stories

woven into a novel. Here stress is laid upon the necessity of careful selection of details. Text for this quarter, Dickens's *Tale of Two Cities*.

In a similar manner, description is studied in the third quarter, objects, persons, and places being the subjects for description. Here comparison and contrast are taught and beauty, clearness, and force of structure are always considered the standard of excellence. Tennyson's *Idyls of the King* is used as a basis for this quarter's work.

The work of the fourth quarter, a course in business letter writing, is apparently more clearly adapted to a business school than that already pursued, yet it is believed that the previous training is a necessity in a good business letter. The series of letters begins with brief notes of application, recommendations, and letters of introduction, and is followed by a series of business letters on real estate, railroad business, and mercantile affairs, the latter including orders for goods, invoices, bills, duns, complaints, and letters explaining contested points in business relations. In all these exercises the outward form and execution are first considered, then the body of the letter is criticised for logical arrangement and clearness of expression, as frequently in business much depends upon the correspondent's use of English. This work is supplemented in the first year by similar letters dictated to shorthand classes and transcribed in typewriting, thus emphasizing its importance.

During the first part of the second year, from the works of Shakespeare as a basis, the principles taught in the first year are reviewed by having the pupils select and outline and from the outline write and recite the various stories interwoven to form the plot of the plays studied. Since the fundamental principles of this work have been taught in the first year, more time can be given to the manner of expression, so that the pupil besides being able to express himself clearly may obtain some degree of force. As an aid to the thorough appreciation of the works of the great poet and the ability to understand and enjoy all good literature, pupils are required to memorize the most beautiful passages of the plays and to consider carefully their scope.

In the study of Shakespeare the fundamental principles of argumentation are taught, and later, from Burke's *Conciliation with the Colonies*, as a sample of argumentative discourse, a more thorough and technical study of the subject is pursued. This work is especially beneficial to the pupil, since its immediate aim is to give him the ability to reason logically, to see the relation between cause and effect, a power necessary for success in the business world, yet one in which not only the average schoolboy but many far beyond the age of schooling are deficient.

In the latter part of the year the course which renders English training of the business school distinctive is taken up. This includes:

(1) A series of letters, involving business questions, by which the ability to write good letters gained by the pupil from the course of business letters taught in the first year is tested and strengthened;

(2) A series of letters incorporating descriptions of lost articles for identification, descriptions of persons for identification, and descriptions applied to specifications for work to be done;

(3) A series of papers based on narration of process, including the narration of some simple process, such as the construction of a simple bookcase or stool, or the making of bread or cake, actually accomplished by the pupil himself, and the narration of a more complex process, such as the manufacture of paper, or the manufacture of ice by the Hygienic Ice Company, witnessed by the pupil.

This work is of such a nature that absolute accuracy in expression is indispensable; thus it forms an excellent test of the ability gained by the pupil in that line from his previous training, and forms a fitting climax for the course of study which is to prepare him for actual service in the business world. The written work based on the subject in hand, which is required throughout the year, affords ample opportunity for the teaching of spelling, grammar, and punctuation, points important for success in every calling.

While the preceding report gives the formal teaching of English in the school, it by no means covers the subject; for this work goes hand in hand with the instruction in every other branch. In order that any degree of proficiency be attained in any department of study, the teacher must insist that the pupil express his thoughts accurately and clearly in good English.

FRENCH.

The growing popularity of modern languages is due, without doubt, to the increasing demand for their use in business, travel, and social life, and to a prevalent belief that beyond the commercial value of a practical knowledge of a living tongue there is good discipline in the study of its idiom and culture in its literature. In the old days it was considered sufficient to be able to read foreign writers in their own vernacular. Such ability was developed by a study not unlike that given to Latin, except in its seriousness and extent. To-day the effort is to teach the language as a spoken tongue, to give students idiomatic, conversational facility, and to increase the earnestness with which the drill work and literary study were formerly carried out.

In the beginners' class in French Fontaine's *Livre de Lecture et de Conversation* is being used. This work is based on the principle that a thorough knowledge of the grammar and a practical use of the language can both be acquired at the same time. Each lesson contains reading, conversation, and grammar, i. e., is at once practical and theoretical. The lessons are progressive, and frequent "recapitulations" give exhaustive questions in review on all grammatical points, while special emphasis is laid upon the study of verbs, the most difficult point in studying French.

From the first, so far as practical, French is the language of the class room, and thus great interest is aroused among the students.

Translation, however, is not entirely banished from the class room. An easy text, edited with notes and vocabulary, is taken up during the second half of the first year.

In the second year *Lectures Courantes*, a continuation of the *Livre de Lecture et de Conversation*, is studied. This book contains oral lessons and also written exercises, the English text of which is based on the French text previously read; *Les Historiens français du XIX^e Siècle* and Fontaine's edition of Dumas' *La Tulipe noire* are the other texts in use.

In the third year *Les Prosateurs français du XIX^e Siècle*, Molière's *Le Bourgeois Gentilhomme* and *L'Avare* are read, as well as two or three modern plays. French has now become exclusively the language of the class room, but, in order to familiarize students with French idioms and their corresponding English phrases, the second half of Grandgent's *French Composition* is used as a text, all corrections of mistakes and explanations being given in French.

In the fourth year *Les Poètes français du XIX^e Siècle*, Molière's *Le Misanthrope*, Corneille's *Le Cid*, and some of the more difficult works of the seventeenth century are read, while original compositions are also included in the program.

GERMAN.

German is studied in the scientific sections for four years, and is optional in the academic sections of the third and fourth years.

The purpose of the study is twofold: (1) Practical knowledge; as the high schools are in no sense merely institutions preparatory for college, it is essential that students should acquire such a practical knowledge of the German language as will be useful to them in everyday life. To this end a pure pronunciation and facility in speaking, reading, and writing the foreign tongue are thoroughly taught in the broadest sense. (2) Theoretical knowledge; besides a practical knowledge, an intelligent appreciation of good German books is developed in the student. To read and to appreciate the German classics and to acquire sufficient knowledge of the history of German literature to furnish the proper setting to the works studied are important features which receive careful attention.

In the first-year class (five hours per week) recitations are at once conducted in German, the student being required to answer in that language questions asked by the instructor. These conversational exercises, however, are carefully graded, omitting all words and phrases not previously given in the text. Every word that is introduced in class is actually taught, and must be committed to memory. Grammar is the foundation upon which these exercises are taught. One fact at a time is developed by all the illustrations at command, so that it is impressed upon the students' minds. It is endeavored to present each idea or rule in such a manner that it dawns upon the perception with-

out explanation in English being necessary. For home review rules in English are provided. By the end of the year a thorough knowledge of the rudiments of the German grammar has thus been acquired, viz, declension of articles, nouns, adjectives, pronouns, active and passive voice of weak and strong verbs, comparison of adjectives, numerals, uses of the more common prepositions and conjunctions, German word order, principal uses of the subjunctive.

Reading texts are introduced almost from the beginning, their principal object being to increase the pupil's vocabulary. About 200 pages of easy German prose are read in the course of the year. The vocabulary of the reading matter is memorized, i. e., the nouns, with their definite article and plural endings, and the verbs in their principal parts. Each word thus acquired receives careful drill, so that it can be applied in all its various relations.

Although German is the language of the class room, English is resorted to whenever necessary to a complete and efficient understanding of the subject. Translations from and into English are frequently made. Brief written exercises are prepared for every recitation, consisting mainly of translations into German. Original composition is encouraged from the beginning.

Second year, four hours per week.—Two hours each week are given to the reading of ordinary German prose, the lessons being prepared at home, while in class these works are carefully translated into English and discussed in German. All grammatical difficulties and idioms contained in the text are thoroughly explained and drilled. Close attention is paid to fluency in reading and to correct and natural intonation of the voice; to this end a short German play is read with assigned parts.

After a careful review of the rudiments of German accidence, as studied in the first year, systematic grammar lessons are introduced, which are illustrated by a thorough drill upon the text read. Special stress is laid upon word formation, the use of the articles, prepositions, and conjunctions, the elements of syntax, especially the use of the modal auxiliaries, the subjunctive and the infinitive modes. Easy connected English is translated into German, and original composition is undertaken once or twice each month. The student is required to write a descriptive or narrative paragraph upon a given subject which is within the range of his vocabulary.

Third year, four hours per week.—Two hours each week are devoted to the reading of classical and contemporary prose and verse selected from such authors as Goethe, Schiller, Heine, Freytag, etc. Translations into English are made whenever the difficulties of the text demand it. Some easy short stories are read at sight, and the student is expected to relate their contents. Prose literature alternates with more extensive works of German poetic literature, selected poems being memorized.

The translation of connected English, such as letters, biographical and historical extracts, is continued in this year and is supplemented by original composition of the same nature. Systematic grammar lessons occur once a week, illustrated by a thorough drill upon the text read in class. The subjects treated include the study of idioms—especially the idiomatic use of prepositions—synonyms, and syntax.

Fourth year, four hours per week.—This year's course comprises mainly the study of German classics. Three are selected from such works as the following: Lessing's *Minna von Barnhelm*; Schiller's *Maria Stuart*, *Die Jungfrau von Orleans*, *Wilhelm Tell*; Goethe's *Herman und Dorothea*, *Egmont*, *Iphigenie*. These works are thoroughly discussed from the literary and dramatic point of view, and the students are required to write monthly essays relating to them. An outline of German literature, with short extracts from German literary productions, supplements this line of studies.

Higher German grammar is studied in conjunction with the texts read in class. Translations of short selections from the best English and American authors and brief original compositions on subjects relating to everyday life are prepared once a week.

Academic sections.—Five hours a week are given to the study of German in the academic sections during the first year, four hours a week during the second year.

In these classes, as Latin grammar has already been studied, the work of three years is covered in two, the study of German grammar being reduced, while the time allotted to reading is increased.

GREEK.

The course in Greek is designed to prepare pupils for the best colleges. It is hoped that those who complete the course will show ability to read at sight Greek prose of average difficulty and to turn passages of connected English into Greek, the two points chiefly emphasized in the college entrance examinations of the present day. Proficiency in these points implies (1) a considerable vocabulary; (2) mastery of the forms; (3) a working knowledge of the rules of syntax. These ends are kept in view throughout the course.

In the first year of study (second-year pupils) White's *First Greek Book* is finished at the end of the third quarter. During the fourth quarter from fifteen to twenty pages of the *Anabasis* are read. This is treated in such a way as to furnish a very thorough review of the forms required in the preceding work and to encourage the pupil to be satisfied with nothing less than the complete mastery of each sentence. This quarter is regarded as the most important portion of the three years' work, because the methods of study adopted at this time and the standard of scholarship set up determine the character of all work to be done thereafter in the high school and in the college.

In the second year of the work (third-year pupils) four books of the *Anabasis* are completed and reviewed. Especial attention is given to

mastering the rules of syntax so far as involved in the *Anabasis*. The forms also require constant review. About forty lessons are completed in Collar and Daniell's *Greek Prose Composition*. Daily practice in sight reading is given.

During the past year the graduating class have read the third and fourth books of the *Anabasis*, the first three books of the *Iliad*, and the seventh book of the *Odyssey*, Collar and Daniell's *Composition* has been completed except six lessons (91-96), and the forms and syntax of the grammar have been thoroughly reviewed.

The text-books used are White's *First Greek Book*, Goodwin's and White's *Anabasis*, Goodwin's *Greek Grammar*, revised, Seymour's or Keep's *Iliad*, and Collar and Daniell's *Greek Prose Composition*.

HISTORY.

History is taught primarily to train the pupil, secondarily to put him in possession of the great body of standard or "orthodox" historical facts.

The particular training aimed at is the cultivation of judgment. That pupils, that men and women, need such training admits of little argument. In the discussion of any subject the mind must answer the questions: What is to the point? What is vitally to the point? In what order must these essential facts be presented? To the extent that men think to the point and talk clearly and forcibly, to that extent are they educated. Failure in these respects marks the untrained, illogical mind.

History is to be studied, too, for its own sake. The past of man's living in society, his conscious effort to better his condition, the story of the labored efforts by which he has overcome difficulties, can never fail to be of interest to other men struggling with the same problems. Nor is the past without lessons for the present. This story, at least in its outlines, the points in it which serve as milestones to mark the progress of this struggle, the so-called standard facts of history, the cultured man or woman must have. "Sighing for other worlds to conquer," "crossing the Rubicon," "meeting one's Waterloo," must mean more than mere phrases to our boys and girls.

An account of the aims of history teaching would be incomplete without mentioning the possibility, in the hands of the resourceful teacher, of making better citizens, better men. Instances abound of deplorable effects following the acts of individuals or States in violation of economic, moral, or other law. Without preaching or needlessly intruding the opinion of the teacher, these may be made lessons for the guidance of the present. As pupils see that institutions are developed to meet certain ends, outlive their usefulness, and are superseded by others better fitted to meet the changed conditions; as they realize that men must be judged, if judged fairly, by the opportunity which their time affords them; as they see that truth is many sided,

we shall develop generous, broad-minded sympathy, without which the training and culture sought must be largely profitless.

It has been said that history is logic written in concrete facts. The problem of the student of history is to arrange these facts, this raw material, according to the laws of thought. If the story of Alexander be asked for, the product must be a narrative conforming to all the laws of narration. If it be the government of Plymouth or a debate on the justice of the execution of Charles I, conformity to the laws of exposition or argumentation is the end sought. To reach this end the skeleton of thought—the outline—should precede the finished product. In many cases the work may as well stop there, for when the outline has been logically made the most important step—the marshaling of essentials—has been taken. The development, the recitation, with its opportunity for teaching relevancy, sticking to the point, expression, etc., is the next step. Pupils are made to see that there are many things which may be said on any subject; that their work is to pick and arrange logically the few best thoughts which will present the subject as a unit.

Home work is frequently made more effective by developing to some extent in the class the topic to be discussed at the next lesson, or a similar thought which may serve as a type. Excellent drill is found in tracing, with either open or closed text-books, topics which run throughout the period under discussion or throughout the year.

The selection of the particular thoughts to be discussed in the class is at first largely a matter of teacher opinion. Still, the cultivation of the pupil's judgment is the end sought. By referring him to standard historical writers his view of the study will be broadened. He will see what there is in the field of history. The study of the institutions of one's country will suggest ideas to be looked for in the study of others. After work of this sort it will be found profitable to ask pupils to read through an extended period to decide what is worth considering in detail, what shall be studied in the class. In this way classroom work is largely planned in accordance with pupil judgment.

In all work it is borne in mind that the class room furnishes the opportunity for teaching, the chance to help the weakness, to direct the strength of pupils. It misses its purpose if it serves simply as the place where pupils may exhibit their strength or weakness.

The secondary purpose of history teaching is achieved more or less incidentally. Facts will stand out more prominently if in the class only those movements and events be discussed which in the teacher's large judgment are the most important.

The following table will show the courses of history offered in the school. The aim in all years is the same, with increasing stress laid on the secondary purpose in the more advanced classes. The methods, while essentially the same, vary with the increasing power of the pupil. In the upper classes the selected units are larger. The paragraph is made the unit for the first quarter of the first year; a theme, as for example the history of political parties in the United States, may well

be demanded in the last quarter of the fourth year. So, too, in getting together the facts, the raw material for classification, greater demand is made on the pupils of the upper classes for outside reading. In the fulfillment of this idea the last five weeks of the third year are given up to an intensive library study of the French Revolution, while the whole course in American history follows this plan.

Year.	Nation.	Text.	Time.	Remarks.
First	Eastern nations ..	Myers's Eastern Nations and Greece.	One-fourth year ..	Required of all pupils.
	Greece	do	do	Do.
	Rome	Allen's Short History of the Roman People.	One-half year.....	Do.
Second....	England	Montgomery's Leading Facts of English History.	.....do	Do.
Third	Europe, since fall of Rome.	Duruy's History of France	One year.....	Elective.
Fourth ..	United States.....	Library method .....	.....do	Do.

LATIN.

The general Latin course covers four years, with five recitations a week in the first and fourth years and four in the second and third years. The aim of the first year's work is to ground pupils thoroughly in forms and to make them familiar with the commonest principles of syntax. In order to give some practice in connected reading before beginning Cæsar, Collar and Daniell's First Latin Book is supplemented by Sanford and Churchill's *Viri Romæ*.

Whether on account of the long vacation or defects in the first year's training, the average pupil is found unable to read a text as difficult as Cæsar at the beginning of the second year. The study of *Viri Romæ* is for this reason continued through the first quarter of the second year and Cæsar is read during the last three quarters. A complete review of forms is found necessary in this year, and as exhaustive study of syntax as possible is made in connection with Cæsar. Text editions of *Viri Romæ* and Cæsar, without notes or vocabulary, are now in use in all classes, with what are felt to be excellent results.

In the third year Cicero's Orations against Catiline are read, with some historical study of the period, and study of Cicero's style. The formal study of Latin composition is begun in this year.

In the fourth year five books of Virgil's *Æneid* and selections from the sixth are read. This is accompanied with the study of Virgil's style; fine passages are occasionally memorized, parallel passages from Latin and other literatures are read in class, and essays on themes suggested by the author and written translations of selected passages are presented. Latin composition is continued in this year.

The amount of Latin read in the course has been materially diminished within the past few years. The chief reasons for the change

are the multiplicity of courses now open to students and the advanced character of the work demanded in all departments. The study of Latin, it is believed, must ever be a difficult one, if it is to make the expected return in training and culture. From the necessity of adapting the general course to the growing demands upon the students, with only limited time, has arisen the college Latin class. This class reads all the additional Latin required for college entrance, having four recitations a week during the fourth year. Pupils of this class make a more thorough study of Cicero's style and of the historical setting of his orations, make a careful study of the sixth book of the *Æneid*, and do more advanced work in composition.

MATHEMATICS.

Algebra.—It is believed that a successful effort has been made to teach the subject from a logical standpoint, development of principles being the constant aim. The pupils have been taught, step by step, the principles underlying every operation, and have developed the relation of principles of increasing breadth; while accuracy, proper arrangement, and clearness of statement have been constantly impressed.

Geometry (second year).—Bookwork has been made subservient to the "originals," and while the main use of the subject as a powerful mental drill has been kept constantly in mind, its practical application to numerical examples has suffered in no way. Here, as throughout the entire mathematical course, stress is laid on exact definitions, rigid logical processes, clearness of conception and expression, sustained courses of proof, exact results, the selection of the best methods, and the cultivation of the powers of insight, judgment, and origination, rather than of memory.

The analytic rather than the synthetic method of proof has been required as the most important, and in many cases the students have traced a proposition back to the primary definitions and axioms, proving all the intermediate propositions through which the line of direct proof extended. The synthetic method has been used as an adjunct, giving the student drill in the formal statement of a chain of reasoning, omitting everything that in any way interfered with its logical development.

Solid geometry and trigonometry (third year).—The third-year course is ample to prepare the student for any college he may desire to enter. The utmost care has been taken in arranging the work to secure conclusive checks and tests of accuracy exclusive of mere book answers, so that the student may be able to find out in his subsequent practical work in surveying just where the error arises and how he may correct it.

Surveying (third year).—The last quarter of the school year is devoted to this subject, two weeks of which comprise practical work in the field, thus affording a fair opportunity to acquire a working knowledge of the instruments and fundamental problems. Numerous parties are

made up entirely outside of school time, and great enthusiasm is shown in taking advantage of the facilities offered for field practice.

Advanced algebra and analytical geometry (fourth year).—The course in advanced algebra is identical with the requirements for advanced standing in Cornell University and for admission to the courses in mechanical and electrical engineering and architecture.

The course in analytical geometry is extended, for the amount of time devoted to it, and is largely in excess of the requirements for admission to Johns Hopkins University, covering the first four chapters of the text-book exhaustively and the following four in a more cursory manner.

PHYSICS.

During the past year there has been no radical change in the department of physics. It is believed that this science should awaken in the pupil any dormant mental faculty, increase his power to think, enlarge his vocabulary, increase his powers of expression, and enable him to understand more fully the civilization into which he has been born.

Of the qualities which go to make the man among men, the effort is made to develop the power of observation in noting phenomena, especially those involving change of energy; to exercise and thus strengthen the reflective faculty in tracing causal relations, and to develop the power of expression in words, drawings, and mathematical symbols by reports upon experiments and problems.

During the last three years the object of the instruction has been to give a wider though a less detailed view of the subject. By proper planning, the subject of light in addition to those already pursued can be taken in the second year.

The same text-book and the same amount of time are allotted to the subject as in former years.

SPANISH.

The study of the Spanish language was quite recently introduced in the high school. The course is practical, no attempt being made as yet to study the literature of Spain. Grammar, conversation, and written exercises are included in the one-year course. The text-books are Edgren's Spanish Grammar, Fontaine's *Doce Cuentos Escogidos*, and Cortina's *El Indiano*.

BUSINESS COURSE.

ARITHMETIC.

First year—four hours per week.

FIRST QUARTER.

I.—Fractions:

- A. Common and decimal fractions. Review.
- B. Simple percentage.
- C. Application to concrete cases.

II.—Simple cash transactions. (Dealing direct, in partnership, and through an agent.)

- A. Comparison of offers.
- B. Quantities and cost, including expenses.
- C. Selling prices, gains, losses, etc.
- D. Shares in investments, gains, etc.
- E. Payments and collections—by currency, check, and money order.
- F. Commercial paper. Bills, invoices, and statements.

SECOND QUARTER.

III.—Simple cash or credit transactions. Allowances. (Dealing direct, in partnership, and through an agent.)

- A. Cost. Allowances for quantity, amount of bill, and for cash settlement.
- B. Comparison of offers.
- C. Selling prices and list prices.
- D. Gains, losses, rates, etc.
- E. Payments—by check, money orders, and drafts.

IV.—Preparation and care of goods. Estimating.

- A. Measuring, sorting, and packing stock.
- B. Allowances for shrinkage, dyeing, etc.
- C. Mixing goods.
- D. Marking goods.
- E. Simple estimating. Quantity and cost.

THIRD QUARTER.

V.—Simple cash transactions. Abroad. (Dealing direct, in partnership, and through an agent.)

- A. Cost in United States and foreign money.
- B. Duties and allowances.
- C. Commissions, gains, losses, etc.
- D. Payments—by foreign exchange.

VI.—Higher cash transactions.

- A. General investments in real estate.
 - 1. Cost payments, income, etc.
 - 2. Expenses of ownership.
 - 3. Sales, losses, gains, etc.
- B. General investments in property.
- C. Settlement of estates.

VII.—Charges for the use of money.

- A. Development of interest cases from percentage.
- B. General drill in interest.

VIII.—Transactions involving time payments.

- A. Not involving notes.
 - 1. Purchases or sales on credit. Interest on payments.
 - 2. Transactions involving loan of money.

FOURTH QUARTER.

- 3. Settlement of payments before due.
- 4. Equation and settlement of standing accounts.
- 5. Income on investments.
- B. Involving notes.
 - 1. Purchases and sales. Payments by note.
 - 2. Settlement of notes when due.
 - 3. Settlement of notes before due.
 - 4. Partial payments.
 - 5. Cash settlements by discounted notes.

IX.—Higher partnership.

A. Copartnership. Investments, gains, liabilities, etc.

B. Stock corporations.

During each quarter frequent written lessons are given and brief discussions of related business topics are required.

Second year—two hours per week.

FIRST QUARTER.

I.—Review of first-year course.

A. Simple cash transactions.

B. Simple cash or credit transactions.

C. Preparations of goods for market.

Home work: The solution of a set of interdependent business transactions, with the preparation of the necessary commercial papers.

SECOND QUARTER.

II.—Review of first-year course.

A. Cash transactions abroad.

B. Higher cash transactions.

C. Charges for the use of money.

D. Transactions involving time payments.

Home work: Continuation of the set of business transactions.

THIRD QUARTER.

III.—Bids, estimates, and contracts.

A. Estimates of quantities.

B. Preparation and calculation of bids.

C. Contracts.

Home work: Practical problems in estimating, applying principles developed in class.

FOURTH QUARTER.

IV.—Investments—Cash and time.

A. Merchandise or general property.

B. Real estate.

C. Stock.

V.—Equation of accounts.

Home work: Test problems in estimates and money settlements.

BOOKKEEPING.

First year—five hours per week.

I.—

A. Ruling.

B. Figure making.

C. Form and use of principal books.

1. Daybook.

2. Cashbook.

3. Journal.

4. Ledger.

D. Journalizing simple transactions.

E. Simple practice sets requiring the use of the foregoing books.

II.—Use of the trial balance, statement, and balance sheet.

III.—Use of auxiliary books:

1. Sales book.

2. Invoice book.

III.—Use of auxiliary books—Continued.

3. Check book.
4. Notebook.
5. Receipt book.

IV.—Advanced practice sets requiring the use of the foregoing books.

Second year—five hours per week.

I.—Review by working difficult practice sets and journalizing intricate transactions.

II.—Complicated partnership books.

- A. Opening.
- B. Keeping.
- C. Closing.

III.—

- A. Making statements.
- B. Making balance sheets.
- C. Adjusting deranged ledgers.

IV.—

- A. Business practice.
- B. Commercial papers.
- C. Banking.

PENMANSHIP.

First year—twenty minutes per day.

I.—Position.

- A. Hand.
- B. Pen.
- C. Paper.
- D. Body.

II.—Movement.

- A. Whole arm.
- B. Forearm.
- C. Finger and combined.

III.—Form.

- A. Small letters.
- B. Capital letters.
- C. Abbreviated.
- D. Classification of letters.

IV.—Spacing.

- A. Width and height of letters.
- B. Space between letters and words.

V.—Slant.

- A. Main slant.
- B. Connective slant.
- C. Uniform slant, for slant or vertical writing.

VI.—Size.

- A. For ledger headings.
- B. For correspondence.
- C. For entries of accounts.
- D. For journal-daybook explanations.

VII.—Speed exercises. Drill upon exercises designed to compel proper movement of hand and arm and to acquire ease in writing.

VIII.—Writing from dictation. From 16 to 25 words per minute and upward.

SHORTHAND.

First year—four hours per week.

FIRST QUARTER.

- I.—Phonographic spelling.
- II.—Representation of consonants and vowels; position of outlines.
- III.—Use of signs for *l* and *r*.
- IV.—Representation of sounds for *s* and *z*.
- V.—Word signs and easy sentence work.
- VI.—Transcription of work involving above principles.

SECOND QUARTER.

- I.—Representation of sounds of *s* and *z* (continued).
 - A. *sez* circle.
 - B. *steh* loop, *str* loop.
 - C. *es* and *ze* strokes.
- II.—Representation of sounds of *h*, *w*, *y*.
 - A. Hay tick and stroke.
 - B. *w* semicircle, stroke, and hook.
 - C. *y* semicircle and stroke.
- III.—Hooks.
 - A. Small initial hooks.
 - B. Small final hooks.
 - C. Combination of *iss* and *sez* with the hooks.
- IV.—Word signs and sentence work.
- V.—Transcription of work involving above principles.

THIRD QUARTER.

- I.—Halving principle.
- II.—Doubling principle.
- III.—Large hooks and *tion* curl.
- IV.—Word signs and sentence work.
- V.—Typewritten transcription of shorthand work.

FOURTH QUARTER.

- I.—Prefixes and affixes.
- II.—Special vocalization.
- III.—Word signs, phrases, contractions, sentence work.
- IV.—Dictation, with transcription on the typewriter, of sentences, proverbs and short business letters.

Second year—five hours per week.

FIRST QUARTER.

- I.—Dictation and transcription of sentences involving common errors in grammar.
- II.—Dictation and transcription of Congressional proceedings.

SECOND QUARTER.

- I.—Dictation and transcription of railroad letters.
- II.—Dictation and transcription of real estate letters.

THIRD QUARTER.

- I.—Dictation and transcription of legal forms.
- II.—Dictation and transcription of Patent Office forms.

FOURTH QUARTER.

I.—Review and test work.

TYPEWRITING.

First year—two hours per week.

FIRST QUARTER.

I.—Preliminary lessons in use and care of typewriter.

II.—Fingering exercises.

SECOND QUARTER.

I.—Exercises for punctuation.

II.—Business letter form.

III.—Official letter form.

IV.—Methods of emphasizing and centering words.

V.—Congressional proceedings.

VI.—Declaration at law.

VII.—Itemized bill.

VIII.—Building specification.

IX.—Patent specification.

THIRD QUARTER.

Transcription from engraved pages of shorthand text-book.

FOURTH QUARTER.

Transcription from engraved pages of shorthand text-book and from shorthand notes.

Second year—four hours per week.

Transcription of shorthand dictation.

Copying from rough draft.

Review exercises based on previous work.

Carbon and letter press copying.

Instructions relating to mechanism, manipulation and repair of the typewriter.

Hectograph and mimeograph copying.

Direct dictation to typewriter.

COMMERCIAL LAW.

Second year—three hours per week.

FIRST QUARTER.

Contracts:

I.—Form of.

II.—Nature of.

III.—Elements of.

IV.—Interpretation of.

V.—Fundamental law of.

VI.—Special laws relating to.

SECOND QUARTER.

Agency:

I.—Agency—a contract.

II.—Parties.

III.—Relation of parties.

IV.—Responsibilities of parties.

V.—Fundamental law.

Partnership:

- I.—Formation.
- II.—Dissolution.
- III.—Parties.
- IV.—Test.
- V.—Kinds.

Corporations: Difference between partnership and corporations as to—

- I.—Legal character.
- II.—Formation.
- III.—Death of members.
- IV.—Transfer of interest.
- V.—Powers.
- VI.—Debts.

Sales:

- I.—Sale—a contract.
- II.—Difference between a sale and an agreement to sell.
- III.—Requisites of a sale.
 - A. Binding contract.
 - B. Existence of property.
 - C. Ownership by seller.
 - D. A specified property.
 - E. Consideration—money.
- IV.—Incidents of a sale.
 - A. Delivery.
 - B. Seller's lien.
 - C. Warranty of quality.
 - D. Warranty of ownership.
 - E. Stoppage in transit.
- V.—Sales by agents.

THIRD QUARTER.

Commercial paper:

- I.—Classes.
 - A. Notes.
 - B. Drafts.
 - C. Checks.
- II.—In the hands of original parties.
 - A. Evidence of debt.
 - B. Condition of enforcement.
- III.—In the hands of subsequent parties.
- IV.—Negotiability.
 - A. Formal requisites.
 - B. Legal essentials.
- V.—Transfer.
 - A. Method.
 - B. Results.
- VI.—Consideration.
- VII.—Effect of knowledge of parties.
 - A. Original.
 - B. Subsequent.
- VIII.—Methods of calculating time.

FOURTH QUARTER.

Interest in lands:

- I.—Quantity.
- II.—Time of enjoyment.

Interest in lands—Continued.

III.—Number of owners.

IV.—Conveyance.

A. Instruments.

1. Warranty deed.

2. Quitclaim deed.

3. Lease.

4. Release.

5. Mortgage.

6. Trust.

B. Essentials.

V.—Law relating to fixtures.

Common carriers:

I.—Obligation.

II.—Liability.

III.—Lien.

Shipping:

I.—Carriers.

II.—Shippers.

III.—Charter party.

Bailment:

I.—Classes.

II.—Obligation arising from benefits to bailor and bailee.

Insurance:

I.—Kinds.

II.—Policy.

III.—Value.

ENGLISH.

First year—five hours per week.

FIRST QUARTER.

I.—Paragraph structure.

(Based on Revolt of the Tartars.)

II.—Sentence structure.

SECOND QUARTER.

I.—Narration.

A. Outlines from Tale of Two Cities.

B. Stories from Tale of Two Cities.

C. Character sketches.

D. Original stories.

THIRD QUARTER.

I.—Description.

A. Outlines from Idyls of the King.

B. Paragraphs from Idyls of the King.

C. Paragraphs from material objects.

FOURTH QUARTER.

I.—Business letters.

Second year—four hours per week.

FIRST QUARTER.

I.—Narration.

A. Outlines from—

1. Merchant of Venice.

2. As You Like It.

SECOND QUARTER.

I.—Argumentation.

A. Instructions in principles of argumentation.

1. Outlines of portions of Burke.
2. Paraphrases of portions of Burke.
3. Briefs of questions of the day.
4. Developed arguments on questions of the day.

THIRD QUARTER.

I.—Review of sentence and paragraph structure, narration and character sketch.

- A. Outlines of essays from De Coverley Papers.
- B. Paraphrases of essays from De Coverley Papers.
- C. Sketches of characters.

FOURTH QUARTER.

I.—Business forms.

- A. Business letters.
- B. Business descriptions.
- C. Business narrations.
- D. Business exposition.

DRAWING.

First year—three hours per week.

I.—Mechanical.

- A. Theory of orthographic projection.
- B. Orthographic projections of solids and developments of surfaces.
- C. Orthographic drawings; outside views and sections of pieces of machinery, finished according to the rules of the United States Patent Office.
- D. Isometric cube and theory of isometric projection.
- E. Isometric drawings of machine details.
- F. Preparation of floor plans and front elevations of small brick house.
(Optional.)
- G. Lettering. Titles printed on each sheet.

II.—Free-hand sketches of room corners, doorways, and other interior details.

III.—Study of architectural styles by means of lectures and outdoor trips to various buildings.

COMMERCIAL HISTORY AND GEOGRAPHY.

FIRST QUARTER.

Ancient and mediæval commerce:

- I.—General view of all commerce—by teacher.
- II.—General outline of possible causes for rise and progress of commerce—class work.
- III.—Study of Phœnicia, using previous outline as help in making outline. Criticism of outlines for completeness, arrangement, single standpoint.
- IV.—Study of Carthage for causes of loss of trade and decline.
- V.—If necessary, development in class of outline of some country's commercial history in order to show how to treat specific cases.
- VI.—Review of the progress of trade to the time of Rome.
- VII.—Study of Rome for beginning of organizations for trade, and of government control of trade.
- VIII.—Summary of ancient commerce, under question: "What did people know of geography, of methods of transportation, of means of exchange?"

Ancient and mediæval commerce—Continued.

- IX.—Study of barbarian invasions and of revival of trade for a view of the beginning of modern institutions.
- X.—Study of Italian cities and Hanseatic League for view of mediæval trade, its improvement over ancient, its work toward the foundation of modern commerce.
- XI.—Study of Mediæval England as a basis for Modern England.
- XII.—Review of all ancient and mediæval commerce, by essays or outlines on such topics as "Causes for the growth of towns," "Similar conditions which have led to commercial greatness."

SECOND QUARTER.

History of commerce of modern Europe.

- I.—Study of colonial empires, outlining each to emphasize cause for decay, effect of colonization on trade of mother country, development of a colonial policy.
- II.—Study of English commerce, for growth of protective policy and conditions leading to free trade.
- III.—Study of commerce of Germany, for effect of unity.
- IV.—Study of commerce of France, for artificial growth.
- V.—Study of industrial revolution—its causes and lasting results.
- VI.—View of each of modern European countries, with summary of modern commercial history.

THIRD QUARTER.

Study of United States commerce.

(From any United States history, on basis of outline prepared by teacher, supplemented by reports upon especially important or difficult events or periods, by individual pupils.)

- I.—Period 1790–1815. Struggle for nationality and neutrality.
 - A. First financial measures.
 - B. First foreign relations.
 - C. Beginning of territorial growth.
- II.—Period 1815–1845. Period of internal improvement.
 - A. Development of tariff policy.
 - B. Westward expansion.
 - C. Beginning of industrial revolution.
- III.—Period 1845–1860. Struggle for extension of slavery.
 - A. Industrial and commercial growth.
 - B. Political struggles.
- IV.—Period 1860–1865. Civil war.
 - A. Beginning of modern political questions.
- V.—Period 1865–1899. Internal growth and territorial expansion.
 - A. Panics.
 - B. Labor questions.
 - 1. Labor unions.
 - 2. Labor bureaus.
 - C. Foreign commercial relations.

FOURTH QUARTER.

Commercial geography.

- I.—Means of transportation and communication.
- II.—Government aids to trade.
- III.—Commodities important to trade.

PHYSICAL CULTURE.

The actual work in the four high schools began October 9. The special examinations opened with the first school days and have been pursued throughout the year. Through the increase in the corps of instructors, individual work has been carried on more exhaustively and systematically than has been possible in the past. The good results are shown in the record books. Physical examinations are not exhaustive, owing to the lack of dressing rooms, character of the clothing, etc.—conditions which have made the plan pursued in the colleges impractical in our mixed schools of younger students.

The examination given is in the form of an interview. Confidential relations almost invariably result; help is asked and freely given. Some very serious cases have presented themselves. The plea for a visiting physician made in last year's report is reiterated with greater emphasis now. A woman physician who can reach and help these cases discovered by the specialist's work—one who would lecture two or three times a year to boys as well as girls on the care of the body and the importance of right living—would be a benefit to our city.

No material changes have been made in the plan of the work except at the Western High School. The new teacher and the gymnasium made practicable several important plans.

First. Extension of work and hours at the Western.

Second. Additional free work at the Business and Eastern schools.

Third. Voice work in the second year at the Central High School during two quarters. At the Eastern, in the third and fourth year classes, one-half year.

Fourth. Personal interview with each girl in all the high schools by physical director.

SCHOLARSHIPS.

The Kendal scholarship in Columbian University was awarded to Miss E. A. Merritt, of the Eastern High School.

Four Columbian University scholarships were awarded, respectively, to Miss May W. Phelps, of the Eastern School, and to Messrs. L. Russell Alden, Mahlon Ashford, and Dyer Smith, of the Central School.

The Woman's College scholarship in the Central High School was awarded to Miss Eda M. Briggs; in the Eastern School to Miss May P. Bradshaw; in the Western School to Miss Lottie Magee.

The Georgetown University Medical scholarship was awarded to Mr. C. C. Fletcher, of the Eastern School.

The National University Medical scholarship was awarded to Mr. B. B. Bagby, of the Eastern School.

Scholarships in Lehigh University were awarded to Messrs. F. B. Tucker, G. R. Bliss, Marcus A. Walker, and J. R. Reigart, of the Cen-

tral School; to Mr. C. B. Graham, of the Eastern School; and to Mr. J. B. Hirst, of the Western School.

A prize medal offered by the Mary Washington Chapter of the National Society of the Daughters of the American Revolution was awarded to Mr. Whitmell P. Tunstall, of the Central School.

A prize medal offered by the Sons of the American Revolution was awarded to Miss Mable Grey Elliott, of the Central School.

LUNCH ROOM.

In planning the Western High School provision was made for the experiment of serving hot luncheon to the students. A large room was fitted with tables, chairs, serving counter, cupboards, gas stoves, and all other essentials of a well-equipped lunch room. These fittings, together with silver, linen, and china, were in the main purchased out of the \$15,000 originally appropriated for the equipment of the Western High School. The initial expense of this movement was therefore met by Congressional appropriation. The expense of heat, light, and room rent was defrayed by the District. There remained only three items of expense to be met by the revenues of the lunch room—cost of raw material purchased at wholesale, cost of preparation and serving of food, cost of maintaining original equipment. By thus minimizing the expenses it was possible to serve food at prices so low as to be within the means of a majority of the students.

It is estimated that during the winter months 200 students daily supplemented their home luncheon by the purchase of something hot from the lunch room, toward spring the number declined to about 150.

With most careful management it was not found possible to reduce the scale of prices originally set, during the first year, but it is confidently hoped that with added facilities and greater experience the prices of the three staple foods—soup, cocoa, and sandwiches—may be reduced the coming year. If the school can in time furnish luncheon cheaper than the parent can furnish it from the home, the problem of feeding the school children will be solved and the only serious objection to a system will be silenced, namely, that the poor pupil, whose need of proper nourishment is greatest, can not afford its purchase, and that consequently hard feeling and class distinctions arise.

So far as it can be ascertained, this enterprise differs in two particulars from any similar effort in public schools in the United States. In the belief that the refining influences of spotless linen, bright silver, and china of graceful shape and beautiful decoration are in themselves a great educational force, and that social relations between boys and girls are best promoted by free intercourse at table, the greatest attention has been given to those details, with results that are gratifying. Where formerly confusion and noise prevailed, there is, under the new régime of the napkin and finger bowl, universal courtesy and quiet. The social side of school life is promoted under conditions favorable to its normal, wholesome development. It is a common thing to

see boys serving girls and coming afterwards with their own portions to share in the general table talk.

The daily menu has received careful attention. It has been the desire to educate students to an appreciation of what foods should be served together, as well as to give them foods at once wholesome and appetizing and always of the best quality. The natural craving for sweets and pickles has been met by serving these in their proper place and proportion. Miss Emma S. Jacobs, directress of cooking in the Washington schools, has made out the menu for each week, furnished all recipes used in the lunch room, and given weekly supervision to the preparation of the food by the cook.

Menu for week of November 28, 1899.

	Cents.		Cents.
Monday:		Wednesday—Continued.	
Vegetable soup, with bread and butter	5	Cocoa, with whipped cream ...	5
Cocoa, with water thin biscuit.	5	Home-made ginger cookies	1
Lettuce sandwiches	2	Milk	2
Home-made sugar cookies.....	1	Snow pudding.....	5
Milk	2	Thursday:	
Date mush with cream	5	Bean soup, with croutons and chopped pickle	5
Tuesday:		Cocoa, with water thin biscuit.	5
Barley broth, with bread stick	3	Ham sandwiches	3
Cocoa, with water thin biscuit	5	Milk	2
Brown bread nut sandwiches..	5	Rice custards, with raisins	5
Baked custards	3	Friday:	
Milk	2	Clear soup, with bread stick....	3
Baked apples with cream.....	5	Baked beans, with lemon.....	3
Wednesday:		Escalloped oysters	10
Cream of tomato, with croutons	5	Rolls, with butter.....	2
Chopped meat sandwiches, with pickle.....	3	Oyster sandwiches	2
		Milk	2

Fruit daily, prices varying according to fruit and season.

The menu submitted is for the first week after the opening of the lunch room. The prices quoted were maintained throughout the year, sandwiches (turkey, chicken, Russian, ham, tongue, etc.) always being 3 cents; soup (with the single exception of oyster soup), with some form of bread, 5 cents; cocoa, with biscuits, 5 cents; and all puddings, blanc manges, gelatines, custards, charlottes, etc., 5 cents. Tea, coffee, and candy have never been sold in the lunch room, but large quantities of imported Holland chocolate have been provided, the sales averaging from 6 to 8 pounds daily.

At the close of the school year the following card was sent out:

To the Patrons of the School:

We desire to gather data in regard to the following facts before we can pronounce a fair judgment upon the success of the lunch room. By answering the questions indicated, signing the card, and returning it at your earliest convenience in the inclosed franked envelope, you will greatly oblige,

Yours, very sincerely,

EDITH C. WESTCOTT, *Principal.*

216 PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

1. Has your child regularly supplemented his home luncheon by a purchase from the lunch room? (——)
2. Have you noted any increase in endurance (——), or improvement in general health (——) which you can attribute to the opportunity offered by the lunch room?

(Signed)

_____,
Parent.

In response to this inquiry 216 cards were received, representing 240 families.

Number replying affirmatively to both questions, 80.

Number replying in the affirmative to the first question but negatively to the second, 112.

Number replying in the negative to both questions, 24.

It is a significant fact that 19 of the 24 who replied in the negative to the questions appended a note of approval of the system and expressed a desire for its continuance. That beside these notes there were received 67 personal notes of appreciation of the benefits of the lunch, with request for its continuance. In the entire inquiry there were but two letters of a critical nature received; one complaining of the character of the food, and the other raising the reasonable objection that any system which excludes a part of the school from its privileges, giving rise to class distinction and jealousy, is a bad thing. As before stated, it is hoped so to reduce prices as to bring the food within the means of the poorest students, serving them more cheaply than they can be served at home. If this can be done, the experiment may be pronounced an unqualified success.

CONCLUSION.

It is a pleasure to acknowledge, for myself and for my associates, the principals of the branch schools, and for all the high-school teachers, the uniform kindness and consideration which you have extended to us in the prosecution of our duties. I wish also to express my appreciation of the many courtesies of the members of the High and Normal School Committee, and of the assistance and guidance of the local trustees of the separate high schools, Judge Job Barnard, Mr. Jesse H. Wilson, Mr. J. W. Whelpley, and Dr. D. H. Hazen, throughout the difficulties of administration.

Very respectfully,

F. R. LANE.

Mr. W. B. POWELL,
Superintendent.

SUPERINTENDENT COOK'S REPORT.

BRIEF SCHOOL DIRECTORY, 1899-1900.

SUPERINTENDENT.

G. F. T. COOK, Sumner School.

CLERK.

J. W. F. SMITH, Sumner School.

DIRECTORS OF SPECIAL WORK.

Director of primary work.....Emma F. G. Merritt (Miss).....1109 I street nw.
 Assistant directorNannie T. Jackson (Miss)318 M street sw.
 Assistant directorImogene Wormley (Miss).....1637 4th street nw
 Director of music.....Alice S. Davis (Mrs.)1320 T street nw.
 Director of drawingThomas W. Hunster1476 Kenesaw avenue.
 Director of manual training....James H. Hill.....227 Wilson street nw.
 Director of cooking.....M. B. Cook (Miss)215 Prince street, Alexandria, Va.
 Director of sewing.....C. E. Syphax (Miss)1928 11th street nw.
 Director of physical cultureH. B. George (Miss)619 B street ne.

NORMAL AND HIGH SCHOOLS.

Name of building.	Location of building.	Name and residence of principal.
Normal School.....	Miner School, corner 17th and Madison streets nw.	Miss Lucy E. Moten, 728 4th street nw.
High School	M street, between 1st street and New Jersey avenue nw.	Mr. Robert H. Terrell, 326 T street nw.

NINTH DIVISION.

Supervising principal, Dr. W. S. MONTGOMERY.

Office, Sumner School; residence, 1912 Eleventh street nw.

Sumner.....	17th and M streets nw.....	Miss M. E. Gibbs, 1741 20th street nw.
Stevens.....	21st street, between K and L streets nw.	Mr. J. B. Clark, 1726 8th street nw.
Magruder	M street, between 16th and 17th streets nw.	Miss A. M. Mason, 2218 I street nw.
Wormley	Prospect street, between 33d and 34th streets nw.	Miss A. T. Howard, 2006 17th street nw.
Briggs.....	22d and E streets nw.....	Mr. F. L. Cardozo, 1333 V street nw.
Garrison.....	12th street, between R and S streets nw.	Miss K. V. Alexander, 1512 Pierce place nw.
Phillips.....	N street, between 27th and 28th streets nw.	Miss G. F. Smith, 1613 Madison street nw.

220 PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.
TENTH DIVISION.

Supervising principal, Dr. J. H. N. WARING.
Office, John F. Cook School; residence, Linden, Md.

Name of building.	Location of building.	Name and residence of principal.
John F. Cook.....	O street, between 4th and 5th streets nw.	Miss Sara C. Lewis, 1120 19th street nw.
Garnet.....	U street, between Vermont avenue and 10th street nw.	Miss Lucinda Cook, 2224 6th street nw.
Banneker.....	3d street, between K and L streets nw	Mr. J. W. Cromwell, 1439 Pierce place nw.
Jones.....	1st and L streets nw.....	Miss K. C. Lewis, 1823 Vermont avenue.
Slater.....	P street, between North Capitol and 1st streets nw.	Miss E. A. Chase, 1109 I street nw.
Logan.....	3d and G streets ne.....	Mr. J. C. Nalle, 1429 Pierce place nw.
Patterson.....	Vermont avenue, near U street nw ..	Miss C. A. Patterson, 1532 15th street nw.
Douglass.....	1st and Pierce streets nw.....	Miss H. A. Hebborn, 1129 24th street nw.

ELEVENTH DIVISION.

Supervising principal, Mr. E. W. BROWN.
Office, Lincoln School; residence, 924 Twenty-fourth street nw.

Lincoln.....	2d and C streets se	Miss M. P. Shadd, 2110 14th street nw.
Randall.....	1st and I streets sw	Mrs. M. E. Tucker, 413 B street se.
Giddings.....	G street, between 3d and 4th streets se.	Miss L. A. Smith, 903 U street nw.
Anthony Bowen...	9th and E streets sw	Miss J. C. Grant, 1448 Pierce place nw.
Bell.....	1st street, between B and C streets sw.	Miss L. F. Dyson, 101 7th street se.
Ambush.....	L street, between 6th and 7th streets sw.	Miss R. J. Baldwin, 1234 4th street nw.
Payne.....	15th and C streets se	Miss M. L. Jordan, 312 3d street sw.
Lovejoy.....	12th and D streets ne	Mr. M. Grant Lucas, 1126 G street ne.

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SUPERINTENDENT COOK'S REPORT.

WASHINGTON, D. C., *December 1, 1899.*

GENTLEMEN: I have the honor to submit herewith the report of the schools of the ninth, tenth, and eleventh divisions of the public schools of the District of Columbia, which embrace all the public colored schools of the city, for the year ending June 30, 1899. The attendance of pupils, the number of teachers employed, the cost of tuition, the cost of supervision, and other information are presented in detail in tabulated statements.

ENROLLMENT.

Whole number of pupils enrolled.....	12,794
Average number of pupils enrolled	10,171
Average number of pupils in daily attendance	9,540

WHOLE ENROLLMENT.

The whole enrollment was distributed as follows, viz:

	Boys.	Girls.	Total.
Normal school	13	57	70
High school	199	479	678
Total.....	212	536	748

The whole enrollment in the ninth division was distributed as follows, viz:

	Boys.	Girls.	Total.
Grammar schools:			
Eighth grade.....	56	125	181
Seventh grade.....	92	178	270
Sixth grade	144	226	370
Fifth grade.....	188	257	445
Total.....	480	786	1,266
Primary schools:			
Fourth grade.....	229	322	551
Third grade.....	248	334	582
Second grade.....	346	331	677
First grade.....	477	490	967
Total.....	1,300	1,477	2,777
Kindergartens	29	39	68
Grand total.....	1,809	2,302	4,111

224 PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

The whole enrollment in the tenth division was distributed as follows, viz:

	Boys.	Girls.	Total.
Grammar schools:			
Eighth grade.....	61	148	209
Seventh grade.....	80	162	242
Sixth grade.....	102	189	291
Fifth grade.....	163	232	395
Total.....	406	731	1,137
Primary schools:			
Fourth grade.....	207	245	452
Third grade.....	226	379	605
Second grade.....	349	341	690
First grade.....	531	555	1,086
Total.....	1,313	1,520	2,833
Kindergartens	41	40	81
Grand total	1,760	2,291	4,051

The whole enrollment in the eleventh division was distributed as follows, viz:

	Boys.	Girls.	Total.
Grammar schools:			
Eighth grade.....	31	79	110
Seventh grade.....	56	109	165
Sixth grade.....	97	166	263
Fifth grade.....	160	254	414
Total.....	344	608	952
Primary schools:			
Fourth grade.....	227	286	513
Third grade.....	279	311	590
Second grade.....	329	354	683
First grade.....	564	518	1,082
Total.....	1,399	1,469	2,868
Kindergartens	34	30	64
Grand total	1,777	2,107	3,884

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

225

The whole enrollment in all schools in the ninth, tenth, and eleventh divisions was distributed as follows, viz:

	Boys.	Girls.	Total.
Normal school.....	13	57	70
High school.....	199	479	678
Total.....	212	536	748
Grammar schools:			
Eighth grade.....	148	352	500
Seventh grade.....	228	449	677
Sixth grade.....	343	581	924
Fifth grade.....	511	743	1,254
Total.....	1,230	2,125	3,355
Primary schools:			
Fourth grade.....	663	853	1,516
Third grade.....	753	1,024	1,777
Second grade.....	1,024	1,026	2,050
First grade.....	1,572	1,563	3,135
Total.....	4,012	4,466	8,478
Kindergartens.....	104	109	213
Grand total.....	5,558	7,236	12,794

AVERAGE ENROLLMENT.

The average enrollment was distributed as follows, viz:

	Boys.	Girls.	Total.
Normal school.....	13	56	69
High school.....	165	421	586
Total.....	178	477	655

The average enrollment in the ninth division was distributed as follows, viz:

	Boys.	Girls.	Total.
Grammar schools:			
Eighth grade.....	49	114	163
Seventh grade.....	77	154	231
Sixth grade.....	120	195	315
Fifth grade.....	132	221	373
Total.....	308	684	1,082
Primary schools:			
Fourth grade.....	192	272	464
Third grade.....	197	276	473
Second grade.....	270	276	546
First grade.....	337	378	715
Total.....	996	1,202	2,198
Kindergartens.....	18	27	45
Grand total.....	1,412	1,913	3,325

226 PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

The average enrollment in the tenth division was distributed as follows, viz:

	Boys.	Girls.	Total.
Grammar schools:			
Eighth grade.....	51	131	182
Seventh grade.....	70	140	210
Sixth grade.....	83	162	245
Fifth grade.....	136	198	334
Total.....	340	631	971
Primary schools:			
Fourth grade.....	171	215	386
Third grade.....	182	314	496
Second grade.....	306	307	613
First grade.....	350	375	725
Total.....	1,009	1,211	2,220
Kindergartens.....	18	23	41
Grand total.....	1,367	1,865	3,232

The average enrollment in the eleventh division was distributed as follows, viz:

	Boys.	Girls.	Total.
Grammar schools:			
Eighth grade.....	25	68	93
Seventh grade.....	47	97	144
Sixth grade.....	78	141	219
Fifth grade.....	142	231	373
Total.....	292	537	829
Primary schools:			
Fourth grade.....	163	216	379
Third grade.....	210	235	445
Second grade.....	257	285	542
First grade.....	386	348	734
Total.....	1,016	1,084	2,100
Kindergartens.....	14	16	30
Grand total.....	1,322	1,637	2,959

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

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The average enrollment in all schools in the ninth, tenth, and eleventh divisions was distributed as follows, viz:

	Boys.	Girls.	Total.
Normal school.....	13	56	69
High school.....	165	421	586
Total.....	178	477	655
Grammar schools:			
Eighth grade.....	125	313	438
Seventh grade.....	194	391	585
Sixth grade.....	281	498	779
Fifth grade.....	430	650	1,080
Total.....	1,030	1,852	2,882
Grammar schools:			
Fourth grade.....	526	703	1,229
Third grade.....	589	825	1,414
Second grade.....	833	868	1,701
First grade.....	1,073	1,101	2,174
Total.....	3,021	3,497	6,518
Kindergartens.....	50	66	116
Grand total.....	4,279	5,892	10,171

AVERAGE ATTENDANCE.

The average attendance was distributed as follows, viz:

	Boys.	Girls.	Total.
Normal school.....	13	56	69
High school.....	158	401	559
Total.....	171	457	628

The average attendance in the ninth division was distributed as follows, viz:

	Boys.	Girls.	Total.
Grammar schools:			
Eighth grade.....	47	109	156
Seventh grade.....	71	150	221
Sixth grade.....	113	187	300
Fifth grade.....	143	209	352
Total.....	374	655	1,029
Primary schools:			
Fourth grade.....	179	259	438
Third grade.....	186	254	440
Second grade.....	255	257	512
First grade.....	311	348	659
Total.....	931	1,118	2,049
Kindergartens.....	17	22	39
Grand total.....	1,322	1,795	3,117

The average attendance in the tenth division was distributed as follows, viz:

	Boys.	Girls.	Total.
Grammar schools:			
Eighth grade.....	48	124	172
Seventh grade.....	66	132	198
Sixth grade.....	81	152	233
Fifth grade.....	127	189	316
Total.....	322	597	919
Primary schools:			
Fourth grade.....	163	202	365
Third grade.....	172	297	469
Second grade.....	284	286	570
First grade.....	324	353	677
Total.....	943	1,138	2,081
Kindergartens.....	15	19	34
Grand total.....	1,280	1,754	3,034

The average attendance in the eleventh division was distributed as follows, viz:

	Boys.	Girls.	Total.
Grammar schools:			
Eighth grade.....	23	65	88
Seventh grade.....	44	92	136
Sixth grade.....	73	136	209
Fifth grade.....	132	217	349
Total.....	272	510	782
Primary schools:			
Fourth grade.....	149	204	353
Third grade.....	192	221	413
Second grade.....	237	265	502
First grade.....	366	319	685
Total.....	944	1,009	1,953
Kindergartens.....	12	14	26
Grand total.....	1,228	1,533	2,761

The average attendance in all schools in the ninth, tenth, and eleventh divisions was distributed as follows, viz:

	Boys.	Girls.	Total.
Normal school.....			
High school....	13	56	69
Total.....	158	401	559
Grammar schools:	171	457	628
Eighth grade.....			
Seventh grade.....	118	298	416
Sixth grade.....	181	374	555
Fifth grade.....	267	475	742
Total.....	402	615	1,017
Primary schools:	968	1,762	2,730
Fourth grade.....			
Third grade.....	491	665	1,156
Second grade.....	550	772	1,322
First grade.....	776	808	1,584
Total.....	1,001	1,020	2,021
Kindergartens.....	2,818	3,265	6,083
Grand total.....	44	55	99
	4,001	5,539	9,540

The per cent of the whole enrollment in the different grades is shown in the following table:

Schools.	Per cent.
Normal school.....	0.55
High school.....	5.30
Grammar schools.....	26.22
Primary schools.....	66.26
Kindergartens.....	1.67
Total.....	100.00

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SCHOOLS.

	Division.			High schools.	Normal schools.	Total.
	Ninth.	Tenth.	Eleventh.			
Normal school				1	1	1
High schools				1	1	2
Total						
Grammar schools:						
Eighth grade	4	5	3			12
Seventh grade	7	6	4			17
Sixth grade	9	7	6			22
Fifth grade	9	9	9			27
Total	29	27	22			78
Primary schools:						
Fourth grade	11	10	11			32
Third grade	<i>a</i> 14	13	12			39
Second grade	<i>a</i> 16	<i>b</i> 15	15			46
First grade	<i>a</i> 20	<i>b</i> 23	23			66
Total	61	61	61			183
Kindergartens	2	2	2			6
Grand total	92	90	85	1	1	269

a Three under instruction of assistant teachers in the Normal school.

b Two under instruction of one teacher.

TEACHERS.

The whole number of teachers employed was 334, of whom 280 were female and 54 male. They were employed as follows:

Supervising principals	3
Normal school	7
High school	29
Grammar schools:	
Eighth grade	12
Seventh grade	17
Sixth grade	22
Fifth grade	27
Primary schools:	
Fourth grade	32
Third grade	36
Second grade	42
First grade	62
Kindergarten	6
Teachers of music	5
Teachers of drawing	6
Teachers of carpentry	6
Teachers of metal working	2
Teachers of cookery	5
Teachers of sewing	9
Teachers of physical culture	4
Director of primary work	1
Assistant director of primary work	1
Total	334

Teachers, graduates of the Washington high and normal schools.....	200
Teachers, graduates of the Washington Normal School only	15
Teachers, graduates of other normal schools	20
Teachers, graduates of high schools only	30
Teachers, graduates of colleges	30
Teachers, graduates of colleges and normal schools	4
Teachers, not graduates of any of the above courses	45
Total	344
Teachers, counted in more than one course	10
Total	334

The day schools cost—

For teachers and supervisors, including office force	\$220,246.87
For janitors	16,150.00
For rent	3,936.00
For fuel	9,590.00
For incidental expenses, including insurance, general supplies, printing, flags, etc	8,494.00
For free text-books and supplies	10,881.11
For kindergarten supplies	1,422.38
For industrial instruction, including manual training, cooking, and sewing	2,466.00
For repairs to buildings	13,676.79
For repairs to plumbing	6,842.16
Total	293,705.31

There were enrolled in the night schools 1,384 persons. They were taught by 25 teachers, of whom 3 were male and 22 female.

The night schools cost—

For teachers	\$2,274.75
For incidental expenses	137.00
Total	2,411.75

The day schools were in session 179½ days; the night schools were open 45 nights.

The cost of schools for supervision and teaching—

Superintendent	\$2,250.00
Clerk	800.00
Messenger	200.00
Supervising principals, 2, at \$2,000 each	4,000.00
Supervising principal, at \$1,840	1,840.00
One director of primary work	1,100.00
One assistant director of primary work	650.00
Total	10,840.00
Cost per pupil (estimated on the average enrollment, 10,171)	1.06

TUITION.

Normal school:	
Principal	1,500.00
One teacher	1,000.00
Two teachers	1,600.00
Two teachers	1,400.00
One teacher	650.00
Total	6,150.00
Cost per pupil (estimated on the average enrollment, 69)	29.76

¹ Including the cost of teaching 9 practice schools, \$4,095.99.

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High school:	
Principal	\$1, 960. 00
Twenty-eight teachers	22, 304. 03
Total	24, 264. 03
Cost per pupil (estimated on the average enrollment, 586)	41. 40
Grammar schools (12 eighth, 17 seventh, 22 sixth, 27 fifth grade schools)	62, 320. 00
Cost per pupil (estimated on the average enrollment, 2,882)	21. 62
Primary schools (32 fourth, 39 third, 46 second, 68 first grade schools)	1 89, 522. 50
Cost per pupil (estimated on the average enrollment, 6,518)	14. 36
Kindergartens (6 teachers)	1, 850. 34
Cost per pupil (estimated on the average enrollment, 116)	15. 95
Special teachers (5 music teachers, 6 drawing teachers, 4 physical-culture teachers)	10, 900. 00
Cost per pupil (estimated on the average enrollment, 10,171)	1. 07
Teachers of manual training (carpentry, 6; metal working, 2; cookery, 5; sewing, 9)	14, 400. 00
Cost per pupil (estimated on the average enrollment, 10,171)	1. 41
Average cost per pupil for tuition in all schools (based on the average enrollment, 10,171)	20. 58
Summary:	
Total cost of instruction, including supervision	220, 246. 87
Whole number of pupils enrolled	12, 794
Average number of pupils enrolled	10, 171
Average daily attendance	9, 540
Average cost of instruction, including supervision, estimated on—	
1. Whole enrollment	\$17. 21
2. Average enrollment	21. 65
3. Average daily attendance	23. 08

Janitors.

Total amount expended	\$16, 150. 00
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Contingent expenses.

Total amount expended	8, 220. 00
Average cost per pupil (estimated on the average enrollment) 80

Kindergartens.

Total amount expended for material and fittings	1, 422. 38
Average cost per pupil (estimated on the average enrollment)	12. 26

Free text-books.

Total amount expended	10, 881. 11
Average amount per pupil (estimated on average enrollment)	1. 06

Industrial instruction.

Total amount expended for material, etc.	2, 466. 00
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Fuel.

Total amount expended	9, 590. 00
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Rent.

Total amount expended	3, 936. 00
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¹ To be increased by the cost of teaching 9 practice schools, \$4,095.99.

Flags.

Total amount expended	\$274.00
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SUMMARY.

Amount expended, grand total	
Average cost per pupil (including high and normal schools) for all expenses except repairs and permanent improvements:	273,186.36
1. On whole enrollment	
2. On average enrollment	21.35
3. On average daily attendance	26.85
	28.63

The following embrace, among other statistics, the average salary per teacher for the normal school, high school, grammar schools, primary schools, special instruction, kindergartens, the number and cost of free text-books and supplies, etc.:

Normal school.

Number of teachers trained	
Average attendance	70
Number of teachers employed	69
Average salary	7
	\$878.57

High school.

Number of pupils enrolled	
Average enrollment	678
Average attendance	586
Per cent of attendance	559
Average number of tardiness per month	95.3
Number of pupils dismissed	49.8
Number of teachers employed	0
Average salary paid	29
Cost of tuition per pupil (estimated on the average enrollment)	\$836.68
	41.40

Grammar and primary schools.

Number of pupils enrolled	11,833
Average enrollment	9,400
Average attendance	8,813
Per cent of attendance	93.4
Average number of tardinesses per month	359.9
Number of pupils dismissed	2
Number of cases of corporal punishment	25
Number of teachers employed	250
Average salary paid	\$607.37
Average number of pupils to the teacher (estimated on the average enrollment)	37.6
Cost of tuition per pupil (estimated on the average enrollment)	\$16.58

Kindergartens.

Number of pupils enrolled	213
Average enrollment	116
Average attendance	99
Per cent of attendance	86.2
Average number of tardinesses per month	7.8
Number of pupils dismissed	0
Number of teachers employed	6
Average salary paid	\$309.73
Cost of tuition per pupil (estimated on the average enrollment)	\$15.95

Special teachers.

Drawing	6
Music	5
Physical culture	4
Average salary paid:	
Drawing	\$687.50
Music	\$810.00
Teachers of physical culture	\$681.25
Average cost per pupil for special tuition (estimated on the average enrollment)	\$1.07

Teachers of industrial instruction.

Manual training (carpentry and metal work)	8
Cooking	5
Sewing	9
Average salary paid:	
Manual training	\$768.75
Cooking	\$620.00
Sewing	\$572.22
Average cost per pupil for industrial instruction (estimated on the average enrollment)	\$1.41

Free text-books and supplies.

	Quantity.	Cost.		Quantity.	Cost.
BOOKS.			BOOKS—continued.		
Æsop's Fables.....	317	\$86.40	Histories:		
Africa, Part I.....	2	.79	Barnes.....	138	\$13.80
Africa, Part II.....	2	.79	Eggleston	25	21.87
Algebras, Wentworth.....	119	119.99	Fiske.....	165	132.00
Arithmetics:			Johnston	44	39.37
Intellectual.....	172	38.70	Montgomery.....	107	89.17
Cook & Cropsey	125	81.04	Ridpath	216	17.28
Standard, Milne.....	299	174.91	McMaster	129	100.40
Elements of, Milne	440	118.80	Hygiene for Young People.....	191	76.57
Arithmetic readers:			Legend of Sleepy Hollow.....	175	7.23
No. 1.....	203	32.48	Miles Standish	159	17.89
No. 2.....	175	39.37	Music readers:		
Australia.....	158	88.48	Second, Mason.....	256	85.33
Civil Government, Fiske ..	62	49.60	Third, Mason	138	5.52
Child's Health Primer.....	322	86.94	Normal First	9	2.31
Dictionaries, Comprehensive.....	230	218.50	Normal Second, Part I.....	113	33.90
Essentials of Health,			Normal Second, Part II.....	85	22.95
Stowell	59	44.64	Normal Third	12	5.40
Evangeline	166	18.67	Music pamphlets	2	.10
Geographies:			Old Greek Stories	184	69.00
Elementary, Redway ..	183	81.50	Readers:		
Elementary, Frye.....	441	214.62	Primer and First,		
Complete, Frye	249	233.44	Franklin	89	17.13
Complete, Redway.....	208	201.76	Second, Franklin	372	107.26
Geographical Magazines ..	170	17.03	Third, Franklin.....	305	77.83
Geologies—Shaler	34	29.75	Fourth, Franklin	288	144.00
Government and Administration, United States.....	93	34.80	Intermediate, Franklin.....	71	35.50
Grammar, Kerl	81	48.60	Fifth, Franklin.....	173	116.34
Hans Andersen Stories.....	242	80.67	First, Normal.....	622	119.73
			Second, Normal.....	659	190.01
			Third, Normal.....	672	268.80

Free text-books and supplies—Continued.

	Quantity.	Cost.		Quantity.	Cost.
BOOKS—continued.			SUPPLIES—continued.		
Readers—Continued.			Paper—Continued.		
Fourth, Normal.....	884	\$442.00	Composition—Cont'd.		
Fifth, Normal.....	86	45.87	No. 3... packages..	2,500	\$493.00
Snow Bound.....	130	14.62	Drawing.....reams..	534	260.99
Story of Two Inaugurations	11	2.09	Examination ..reams..	846	730.08
War of Independence.....	1	.30	Practice.....packs..	12,050	650.70
Word Analysis.....	79	20.67	Block tablets.....	11,810	354.30
Word and Sentence Book,			Wrapping.....reams..	28	84.00
Merrill.....	1,435	315.31	Pencils:		
Washington Day by Day..	46	34.50	W. P. S.....gross..	443	398.70
Total.....		4,834.41	Drawing.....do.....	138	143.90
SUPPLIES.			Penholders.....do.....	70	52.50
Art forms.....	45	54.00	Pens.....do.....	1,325	424.00
Birds, sets.....	3	37.50	Pottery.....pieces..	54	22.50
Blackboard rubbers.....	1,416	59.00	Rulers, brass edge.....	72	2.70
Blackboard pointers.....	54	13.50	Rulers, plain edge.....	756	18.90
Brushes, paint.....	288	4.32	Scissors.....	1,961	245.15
Cardboard.....sheets..	4,090	48.80	Twine.....balls..	12	.30
Chalk.....gross.....	1,400	112.00	Vases.....	36	15.00
Clay.....barrels.....	30	35.60	Total.....		5,700.79
Drawing tablets.....	9,288	116.05	ADDITIONAL EXPENSES.		
Erasers.....	8,320	55.47	Blank books and printing.....		26.15
Ink.....quarts.....	1,027	102.70	Hauling and labor.....		71.95
Maps, relief.....	7	140.00	Freight.....		.66
Measures, liquid.....sets..	16	3.20	Proportionate part of sal-		
Mucilage.....quarts.....	60	30.00	ary of custodian.....		246.60
Paints.....boxes.....	972	136.08	Stamp pad and ink.....		.55
Paper:			Total.....		345.91
Composition—			Grand total.....		10,881.11
No. 1... packages..	8,360	484.88			
No. 2.....do.....	6,306	370.97			

TABLE I.—Showing the more essential statistics of the night schools for every year since first appropriation was made for this instruction.

Year.	Whole enrollment.	Average enrollment.	Average attendance.	Per cent of attendance.	Time.	Number of school buildings used for night schools.	Number of teachers.	Entire cost of teaching.
					Number of nights.	Number of hours.		
1885-86.....			232		37.0	74.0	1	(a)
1886-87.....		467	378	80.9	52.0	104.0	3	\$1,248.00
1887-88.....	1,053	738	650	88.0	51.0	102.0	5	2,295.00
1888-89.....	1,080	703	619	88.0	57.5	115.0	5	2,300.00
1889-90.....	1,158	744	644	86.5	55.0	110.0	5	2,200.00
1890-91.....	1,395	846	700	82.7	56.0	112.0	6	2,699.98
1891-92.....	1,353	855	731	85.4	48.0	96.0	6	2,320.00
1892-93.....	1,315	896	779	86.8	47.0	94.0	6	2,501.50
1893-94.....	1,365	921	792	85.9	47.0	94.0	6	2,520.50
1894-95.....	1,342	840	723	86.0	47.0	94.0	6	2,498.00
1895-96.....	1,508	973	851	87.4	48.0	96.0	7	2,500.00
1896-97.....	1,420	946	801	84.4	45.0	90.0	6	2,299.00
1897-98.....	1,395	921	808	87.7	42.0	84.0	6	2,097.00
1898-99.....	1,384	772	593	77.1	44.7	89.4	7	2,274.75

a Expense borne partly by the District of Columbia and partly by an association of ladies who were active in their efforts to have the night schools established.

TABLE II.—*Showing the average number of pupils to the school of grades below the high school based on the whole and the average enrollment.*

Grade.	Schools.	Whole enrollment.	Average to the school. <i>a</i>	Average enrollment.	Average to the school. <i>b</i>
Eighth.....	12	500	41.6	438	36.5
Seventh.....	17	677	39.8	585	34.4
Sixth.....	22	924	42.0	779	35.4
Fifth.....	27	1,254	46.4	1,080	40.0
Fourth.....	32	1,516	47.3	1,229	38.4
Third.....	39	1,777	45.3	1,414	36.2
Second.....	46	2,050	44.5	1,701	36.9
First.....	66	3,135	47.5	2,174	32.9
Total.....	261	11,833	45.3	9,400	36.0
Kindergarten.....	6	213	35.5	116	19.3
Grand total.....	267	12,046	45.1	9,516	35.6

a Based on the whole enrollment.*b* Based on the average enrollment.TABLE III.—*Showing the whole number enrolled in each grade and per cent of enrollment for the school years 1897-98 and 1898-99, with increase and decrease.*

Grade.	1898-99.		1897-98.		Increase.	Decrease.
	Whole enrollment.	Per cent.	Whole enrollment.	Per cent.		
Normal School.....	70	0.55	56	0.43	14	
High school.....	678	5.30	690	5.32		12
Eighth.....	500	3.91	553	4.26		53
Seventh.....	677	5.29	717	5.53		40
Sixth.....	924	7.22	939	7.24		15
Fifth.....	1,254	9.80	1,277	9.84		23
Fourth.....	1,516	11.85	1,640	12.63		124
Third.....	1,777	13.89	1,844	14.21		67
Second.....	2,050	16.02	2,235	17.23		185
First.....	3,135	24.50	3,024	23.31	111	
Kindergarten.....	213	1.67			213	
Total.....	12,794	100.00	12,975	100.00	338	519
SUMMARY.						
Normal and high schools.....	748	5.85	746	5.75	14	12
Grammar schools.....	3,355	26.22	3,486	26.87		131
Primary schools.....	8,478	66.26	8,743	87.38	111	376
Kindergartens.....	213	1.67			213	
Total.....	12,794	100.00	12,975	100.00	338	519

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

TABLE IV.—Showing the number of schools of each grade below the high school.

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Division.	Grade.									Total.
	Kinder-gartens.	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	
Ninth	2	20	16	14	11	9				
Tenth	2	23	15	13	10	9	9	7	4	92
Eleventh	2	23	15	12	11	9	7	6	5	90
Total	6	66	46	39	32	27	22	4	3	85
								17	12	287

TABLE V.—Showing the absolute and relative growth of the high school.

Year.	Number enrolled in all grades, excluding Normal School.	Number enrolled in the high school.	Per cent of enrollment in all grades, excluding Normal School.	Teachers in all grades, excluding Normal School teachers.	Teachers in high school.	Per cent of teachers in high school on number of teachers in all grades, excluding those in Normal School.	Number of graduates from high school.
1885-86.....	10, 138	247	2.4	174	6		
1886-87.....	10, 345	276	2.7	182	8	3.4	33
1887-88.....	11, 000	361	3.3	188	9	4.4	39
1888-89.....	11, 130	416	3.7	197	11	4.8	51
1889-90.....	11, 398	345	3.0	211	12	5.5	67
1890-91.....	12, 106	376	3.1	226	14	5.6	41
1891-92.....	12, 253	407	3.3	240	17	6.1	86
1892-93.....	12, 303	444	3.6	254	18	7.0	69
1893-94.....	12, 207	460	3.7	268	19	7.0	90
1894-95.....	12, 453	618	4.9	281	22	7.8	99
1895-96.....	12, 846	675	5.2	292	24	8.2	131
1896-97.....	12, 824	716	5.7	303	26	8.5	49
1897-98.....	12, 919	690	5.3	312	27	8.6	79
1898-99.....	12, 724	678	5.3	327	29	8.8	103
							92

TABLE VI.—Showing the number of schools of each grade, two of which occupy one room.

Division.	Grade.				Total.
	First.	Second.	Third.	Fourth.	
Ninth	16	12	4		32
Tenth	22	15	10	3	50
Eleventh	20	11	5		36
Total.....	58	38	19	3	118

TABLE VII.—Showing the number of school buildings and schoolrooms owned and rented.

Years.	Buildings.			Rooms.			Years.	Buildings.			Rooms.		
	Owned.	Rented.	Total.	Owned.	Rented.	Total.		Owned.	Rented.	Total.	Owned.	Rented.	Total.
1884-85.....	10	2	12	95	15	110	1892-93.....	21	2	23	198	10	208
1885-86.....	12	4	a16	114	17	131	1893-94.....	22	2	24	206	10	216
1886-87.....	11	4	15	112	17	129	1894-95.....	22	2	24	206	10	216
1887-88.....	13	9	22	129	28	157	1895-96.....	22	3	25	212	22	234
1888-89.....	13	8	21	129	27	156	1896-97.....	24	3	27	224	17	241
1889-90.....	18	4	22	156	21	177	1897-98.....	24	3	27	226	20	246
1890-91.....	18	4	b23	166	22	190	1898-99.....	24	3	27	c226	d20	246
1891-92.....	21	3	24	186	21	207							

a Building owned by first six divisions given up at end of the school year
b Including one two-room building (free of rent to the District of Columbia) given up at the end of the school year.
c Nineteen for high, two for supervising principals' offices, seven for industrial schools, six for kindergartens.
d Two used for normal school. Eleven rooms for industrial schools.

Number of grammar and primary schools, 261.

TABLE VIII.—Showing growth of the schools during the last thirty-one years.

Year.	Number of schools.	Number of teachers.	Number of pupils.	Year.	Number of schools.	Number of teachers.	Number of pupils.
1867-68.....	41	41	2,300	1883-84.....	140	154	9,181
1868-69.....	52	52	3,000	1884-85.....	149	162	9,614
1869-70.....	66	63	3,650	1885-86.....	161	174	10,158
1870-71.....	68	66	4,986	1886-87.....	168	182	10,365
1871-72.....	75	78	4,661	1887-88.....	176	191	11,040
1872-73.....	76	86	5,188	1888-89.....	186	202	11,170
1873-74.....	74	87	5,280	1889-90.....	197	216	11,438
1874-75.....	75	89	5,489	1890-91.....	214	230	12,132
1875-76.....	76	90	5,454	1891-92.....	224	244	12,280
1876-77.....	79	92	5,954	1892-93.....	229	258	12,329
1877-78.....	96	109	6,515	1893-94.....	236	272	12,233
1878-79.....	108	119	7,731	1894-95.....	246	286	12,479
1879-80.....	117	130	8,080	1895-96.....	253	297	12,876
1880-81.....	121	134	8,164	1896-97.....	255	308	12,854
1881-82.....	130	143	8,303	1897-98.....	270	318	12,975
1882-83.....	135	147	8,735	1898-99.....	271	334	12,794

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

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The following is a list of the owned and rented school buildings, giving the year of erection and names of those after whom named:

Schools.	Erected.	For whom named.
OWNED.		
Ambush	1889	Enoch Ambush.
Anthony Bowen	^a 1867	Anthony Bowen.
Banneker	1882	Benjamin Banneker.
Bell	1889	George Bell.
Briggs	1889	Martha B. Briggs.
Cook	^b 1868	John F. Cook, sr.
Douglass	1896	Frederick Douglass.
Garnet	1880	Henry Highland Garnet.
Garrison	1889	William Lloyd Garrison.
Giddings	1887	Joshua R. Giddings.
High School	1890	
Jones	1889	Alfred Jones.
Lincoln	1871	Abraham Lincoln.
Logan	1891	John A. Logan.
Lovejoy	1872	Elijah P. Lovejoy.
Magruder	1887	J. B. Magruder.
Patterson	1893	James W. Patterson.
Payne	1896	Daniel A. Payne.
Phillips	1890	Wendell Phillips.
Randall	1876	Eliza G. Randall.
Slater	1890	John F. Slater.
Stevens	^c 1868	Thaddeus Stevens.
Sumner	1871	Charles Sumner.
Wormley	1884	James Wormley.
RENTED.		
Miller	1866	
Miner	1877	Myrtilla Miner.
917 P street NW	1876	Location.

^a Reerected in 1897.

^b Reerected in 1877.

^c Reerected in 1896.

ATTENDANCE.

The whole number of pupils enrolled was 12,794. The entire enrollment embraced 75 per cent of the estimated school population of these divisions. It was 181 less than in the previous school year. The decrease was due to the appearance of smallpox and to the rigid enforcement of the rule requiring vaccination or other protection against the disease as a condition for securing or retaining membership.

The average number of pupils enrolled was 10,171. The average number in daily attendance was 9,540. In the former it was 407 and in the latter 500 less than in the previous year. The decrease in each item, as would naturally be inferred from what has already been said, was due to the prevalence of smallpox. It appeared that a considerable number of pupils who had not been vaccinated or otherwise protected against smallpox had, during previous years, gained admission to the schools. In the enforcement of the rule all such pupils were

removed from the schools, and readmission permitted only through compliance with the rule. There were many who failed to return. The disease in several instances required the closing of schoolrooms and school buildings temporarily, when it occurred in families whose children were enrolled in the schools, to be fumigated as a precaution. Such action not only affected the children who were quarantined, but, in the alarm created, had its effect in detaining many children at home for a greater or less period of time after the schoolroom or school building had been reopened.

In the absence of any local census by which this school population may be known or even closely approximated, it is impossible to show accurately the per cent of the school population embraced in the enrollment in the schools. If the entire colored population in the District be placed at 90,000, which is believed to be a reasonable estimate, and an allowance of two children of legal school age to every nine persons of this population be granted, the number of colored children of school ages in the District will be 20,000. If 15 per cent of this school population reside in the county outside of the city, there are about 17,000 residing in the city. It is believed that this is rather under than over the actual number of colored children of legal school ages. The difference between 12,794, the entire enrollment, and that of the estimated school population of 17,000 would show that there were 4,206 children that did not attend the public schools.

The entire enrollment does, however, indicate full enjoyment of the year's instruction. In it are included all degrees of length of attendance, from that of a few days to that of almost the entire school year, though more largely of the less than the greater part of the school year. These figures indicate, and, in my opinion, with a good degree of approximation, that about one-fourth of this school population was not at any time enrolled in the public schools; and it may be said without fear of successful contradiction that, with a very few exceptions, it was not enrolled during the year in schools of any character. The fault lies not with the school authorities, since the existent provision not only does not permit the enrollment of this large number, but it also denies proper accommodation to thousands of those who are enrolled.

The degree of full enjoyment of school privileges may be seen in the average number of pupils in daily attendance. It was 9,540. The difference between this number and that of the entire enrollment indicates the number of pupils whose attendance was of fractional character. It may thus be shown that the number of children of legal school ages who did not attend the public schools and the number of those whose attendance was more or less partial comprised about 43.8 per cent of the entire colored school population.

The following table, in which the number of pupils on the rolls the last day of each month of the school year, in each division, is shown, affords a view of the monthly fluctuations in attendance:

Pupils on the rolls the last day of each month.

[Normal school not included in this table.]

Month.	Total, 1897-98.	High school.	Division.			Total. 1898-99.
			Ninth.	Tenth.	Eleventh.	
September.....	11,013	641	3,400	3,360	3,318	10,719
October.....	11,148	635	3,528	3,436	3,410	11,009
November.....	11,175	620	3,486	3,361	3,282	10,749
December.....	10,776	600	3,363	3,221	3,128	10,312
January.....	10,746	583	3,389	3,221	3,045	10,238
February.....	10,569	576	3,057	2,919	2,538	9,090
March.....	10,260	569	3,135	3,057	2,653	9,414
April.....	9,898	552	3,126	3,005	2,648	9,331
May.....	9,616	540	2,990	2,928	2,575	9,033
June.....	9,456	518	2,937	2,909	2,577	8,941

The fluctuations were somewhat greater than in the previous year, which were due to causes already stated. The difference between the largest and the least number on the rolls the last day of the month was 2,068. The largest enrollment is usually made in October and November, after which there is a constant decrease, though not in the same ratio, till the close of the school year. The causes, aside from occasional presence of contagious diseases, are, in the inclement season, lack of proper clothing and shoes, and in the element, the larger opportunity for outside employment.

These fluctuations include many pupils, whose proper locating in the schools, either on their return in the same or in a subsequent year, gives much difficulty. In the progress made by the school, more or less, as the time lost is little or much, there is often presented to the teacher choice between large attention to these at the expense of the school as a whole, in the effort to close the gap between their attainment and that of the school, and to leave them largely upon their own resources. In the acceptance of the former the progress of the school is retarded, and, in energy not reasonably taxed, listlessness ensues. In the acceptance of the latter, discouragement follows, with subsequent withdrawal, from the want of the continuous sequence in study through which the work at hand may be thoroughly understood and mastered. Such pupils, though nominally in grade, are actually out of grade, as their attainments are less than the requirement of the grade at that stage of its progress, and more than that of the grade next below. In the absence of a classification of pupils, by which the grade time limit will be less than that of the school year, it were better, in my opinion, whether viewed from the standpoint of the pupil or that of the teacher as to economy of time and as to thoroughness of pursuit,

that there be established to extent needed, to embrace this large class of pupils, schools of greater flexibility and less enrollment to which such pupils may be sent to make up the deficiency essential to proper grading. From this class of schools transfer to the proper grade school could be made at any period of the school year when the attainment of the pupil is equal to that of those in the grade school at the date of the transfer. The less enrollment in such class of schools is favored by its mixed character in respect to grade, and hence the larger degree of individual instruction than is required in the school closely graded.

Leaving school at different stages of grade accomplishment, and reentering during the same year when the grade has considerably advanced from the point at their departure or in a succeeding year when the grade work is short of or in advance of the point previously reached by them, there is presented in the effort to locate them properly with due regard to economy of time with the just maintenance of the interests of others a very difficult problem. As these pupils are largely the creatures of adverse circumstances in life, and whose aggregate school life is necessarily very limited, to them economy of time is a very important consideration. At the most their school life can extend over but a very few years, and even that without the degree of continuity so essential to thorough attainment along all lines of effort. In the effort to maintain the rights and interests of the many, this irregular class of pupils can not in the closely graded school receive the attention their circumstances require to afford them the fullest possible benefits of school life consistent with their condition. These fluctuations, in indicating large early withdrawal from school life, suggest the advisability of largest and best provision for schools of the lower grades.

If, in the bestowal of the benefits of a public-school system, the largest possible degree of enjoyment by the masses be of primary consideration, then the provision for the first five grades, which are peculiarly the schools of the masses, should in every particular be the best possible. Not only should they have accommodation ample in its extent and complete in its character, but a teaching force of best qualification, natural and acquired, and of experience, fully ripe, in the excellent fruit of the past. To restrict, however, such teaching force to these grades, there must be inducement necessary for due recognition of it in the larger compensation for its services.

The degree of punctual attendance, as indicated by the number of cases of tardiness for the school year, is yet excellent. The cases numbered 4,108, or 40 to every 100 pupils. The percentage of tardiness is almost insignificant when the possibilities for it are considered. The degree of formation of the habit of punctuality is large and the training through which it is obtained can not be without excellent effect upon the future of the child.

The following table shows the whole number of pupils enrolled, the average number enrolled, the average number in daily attendance, each

with the percentage of increase from year to year, and the percentage of attendance, based on the average enrollment, during the last fourteen years:

[Normal School not included in this table.]

Year.	Whole number enrolled.	Percentage of increase.	Average number enrolled.	Percentage of increase.	Average daily attendance.	Percentage of increase.	Percentage of attendance.
1885-86	10,138	5.62	8,191	6.52	7,756	6.43	94.6
1886-87	10,345	2.04	8,448	3.13	7,956	2.57	94.2
1887-88	11,000	6.33	8,754	3.62	8,266	3.89	94.4
1888-89	11,130	1.18	9,049	3.36	8,549	3.42	94.5
1889-90	11,398	2.40	9,250	2.22	8,728	2.09	94.3
1890-91	12,106	6.21	9,679	4.63	9,140	4.72	94.4
1891-92	12,253	1.21	9,915	2.44	9,363	2.43	94.4
1892-93	12,303	.40	10,072	1.55	9,535	1.80	94.6
1893-94	12,207	.....	10,116	.43	9,627	.95	95.1
1894-95	12,453	1.97	10,021	.....	9,457	.....	94.3
1895-96	12,846	3.05	10,266	2.38	9,738	2.88	94.8
1896-97	12,824	.....	10,391	1.20	9,874	1.37	95.0
1897-98	12,919	.73	10,523	1.25	9,985	1.15	94.8
1898-99	12,724	.....	10,102	.....	9,471	.....	93.7

ACCOMMODATION.

The supreme need of these divisions of the public schools of the District of Columbia is accommodation—accommodation not only to embrace the thousands of children of school ages for whom there is absolutely no provision, but also the proper care of thousands of those who are now annually enrolled in the schools. Adequate accommodation suggests a seat for every pupil, to be occupied the full number of hours that have been named by the board of trustees in its rules and regulations as essential to the due completion of the work prescribed for the grade. It goes without the saying that it also implies the conditions for comfort and health, through which the physical, moral, and intellectual welfare of the pupil is promoted and maintained.

The lack of accommodation, cumulative through years of inadequate provision for the annual growth of the school population, has resulted in conditions that seriously menace the welfare of the schools. It compels in nearly every building, not only in the first and second grades, the assignment of two schools to the use of one room, but also largely in the third and fourth grades, and in some buildings the reduction of the session of schools above the fourth grade to the half day is prevented only by the transfer of schools to other buildings more or less remote from the residences of the pupils, but not without considerable loss in the enrollment on account of the imposed distance.

In the Randall Building, located in South Washington, which contains ten rooms, of which two are in the basement, there were seventeen schools. To remove the necessity for the reduction of the session of the fifth and sixth grade schools to half time, two of the schools of lower grade were transferred to the Ambush Building.

The want of schoolrooms equal in number to that of the schools imposes, aside from the reduction of the school session, discomforts and disadvantages, which are to be found in the unseasonable hours for instruction, in the difficulties in the adjustment of desks and seats to the physical requirements of the pupils, and in the lack of opportunity for the maintenance of the best sanitary conditions.

The extension of the school hours to a late hour in the day, as required by the afternoon session, deprives the pupils of the larger opportunity for acquisition and development permitted by the earlier hours of the day, in which mental vigor is usually at its best. This is very noticeable in the degree of languor and waning attention during the later hours in the afternoon schools of all grades, and the more particularly in those of the lowest grades.

The original sitting provision in each school building was determined by the grade of school to be located in it when it was first occupied, and consequently the seats and desks were adapted to the sizes of the pupils. In the want of additional accommodation to meet the requirements of the larger enrollment consequent upon the annual increase of the school population it has been found necessary, in the use of one room by two schools, to make frequent changes in the furniture to adapt it to the physical needs of the pupils. It sometimes happens that, from the want of furniture by which the proper adaptation to sizes may be made and by the use of the same room by schools of different grades, pupils occupy seats that are either too large or too small for them. In the physical discomfort caused by this necessity there are necessarily mental reaction averse to proper school effort and inclination to bodily deformity through the unnatural positions forced upon the pupil. These frequent changes of furniture also result in such perforation of the floors as to make it difficult to secure the firm setting of the pupils' desk and chairs.

The school buildings of most recent construction have been largely furnished with the adjustable desk and chair, by which there is easy adaptation to the physical requirements of the pupils without the expense consequent upon the frequent changes in the taking up and resetting of the furniture often found necessary where this furniture is not used, and without the consequent injury to the floors. This class of furniture constitutes, however, a very small per cent of the furniture used in the schools. It could not be placed in other school buildings without large expense in the displacement of other furniture, the most of which is in good condition and in size adapted to the grades of school for which it was purchased, and by which it could be used if the number of schoolrooms were equal to the number of schools.

In partial relief of this condition there should be located at least one new eight room building in each of the three divisions, and preferably in the most congested section of each division. In pursuance of this opinion I would recommend as follows:

1. That an appropriation for a site and an eight-room building be sought for the ninth division, to be located at such point as will afford greatest relief to the Briggs and the Stevens schools.

2. That an appropriation for a site and an eight-room building be sought for the tenth division, to be located at such point as will give the greatest relief to the John F. Cook, Bauneker, and Jones buildings.

3. That an appropriation be sought for a site and an eight-room building for the eleventh division, to be located at such point as will afford greatest relief to the Randall and the Ambush buildings.

Though there is most urgent need of all these buildings, the degree of urgency is not shown in the order in which they have been named. The most urgent need is that of the eleventh division, very closely followed by that of the tenth.

These three buildings would materially lessen the present very congested conditions and would, each in the section of the division in which it should be located, permit full-day session to schools above the second grade. They would not, however, prevent the continuance of half-day session to some of the schools in the division.

Three eight-room buildings would furnish twenty-four schoolrooms. The number of schools above the second grade having half-day session was twenty-two. Before the erection of these buildings can be effected the number of such schools would be in excess of the number of schoolrooms these would provide. In the absence of the number of buildings required for full provision, there would be required a like provision extending over a period of several years to afford all schools above the first grade the normal time for due completion of the year's work.

In my opinion not only every school above the first grade, but also those of the first grade should have entire occupancy of the schoolroom. This opinion is based upon the requirements of proper sanitary conditions, as well as upon conditions essential to most vigorous mental effort. Aside from the insanitary condition resulting from the daily occupancy of the same room by the large number of different children in the aggregate of two schools, the interval of less than thirty minutes between the departure of one and the assembling of the other is too small for putting the room in effective sanitary condition. It is impossible to secure the best mental effort from children in the later hours of the day, and this difficulty is greatest with children of the least school age.

From and after the passage of the act by which provision was made for the organization and maintenance of schools for colored children in the cities of Washington and Georgetown until 1878 these schools received of all moneys expended for school purposes such proportion as the whole number of the colored children of legal school ages bears to the whole number of all children of legal school ages in the cities of Washington and Georgetown. During the maintenance of this provision the accommodation for the school population kept nearer pace with the annual enrollment from year to year than it has since.

Since that year the appropriations for sites and buildings have not been determined by that act, in consequence of which the accommodation for this school population has been much less than it would have

been under the provisions of the act. Had such provision maintained to the present day, there is not the least doubt that the accommodation for these schools would have been more than it now is.

The very congested condition of the accommodation, which has extended for years, and its increasing tendency from year to year are easily accounted for in the very limited provision to meet the needs of the school population in its annual increase.

In the removal of the ill closet conditions that have, more or less, prevailed in the past, now being permitted through specific appropriation by Congress, there is most gratifying promise of improved sanitary conditions—not only improved sanitary conditions through effective plumbing by which comfort and health are promoted, but, in connection therewith, a general environment of large educative value.

SCHOOLS AND SCHOOL WORK.

In all there were 269 schools during the year, or 14 more than in the previous year. They were classified as follows: Kindergarten, 6; first grade, 66; second grade, 46; third grade, 39; fourth grade, 32; fifth grade, 27; sixth grade, 22; seventh grade, 17; eighth grade, 12; high school, 1; normal school, 1. The graded schools were accommodated in 202 rooms. The excess of schools over schoolrooms was provided for by the use of one room by two schools to the extent necessary. The number of schools sharing in this divided occupancy of the schoolroom was 118. Of grades and the number in each grade they were as follows: First grade, 58; second grade, 38; third grade, 19, and fourth grade, 3. As the time prescribed for the session of the first-grade schools is three and one-half hours, it is possible without abridgment of it to give to each of the two schools occupying the same room, one in the forenoon and the other in the afternoon, the full time. In schools above the first grade, however, in the longer time prescribed for due completion of grade work, there is of necessity such abridgment of time as seriously to imperil the thoroughness of the work, and, in many instances, to make its accomplishment without repetition impossible.

As the time for the completion of the part of the school course prescribed for any grade is supposedly adapted to average capacity, this shortening necessarily affects unfavorably all pupils of average capacity, as well as those of that below it, in depriving them of the opportunity for receiving the individual attention more or less needed in every school. In the lessened tasks often made necessary by the reduced time for instruction it likewise affects the pupil above the average capacity, inasmuch as listlessness and discouragement are, if not habituated, at least favored through the want of opportunity for the due taxing of his mental energy. What is worse is that this deprivation of time for proper and efficient school pursuit is not restricted to one year, but, with very many pupils and with a constantly increasing number, is extended to the fifth year of his school life or the first grammar school year of the course. From this fact it may be seen that it in

many instances requires that the child shall complete in one and a half or two years that for the completion of which competent judgment and long experience claim three or four years, or the alternative of lengthening his years in school beyond the limit of the legal school age through the possible grade repetition that may result. The effect of this condition upon the pupil, considered immediately with reference to present effort at attainment or remotely with regard to future effort, can not be otherwise than adverse to proper training and thorough scholarship. In the continued existence of this condition, produced by the want of adequate accommodation, there is ever present very serious menace to the efficiency of all school work.

If there can be no relief from this condition the suggestion, in consideration of the interests of the many, that schools of the second four grades instead of those of the first four be reduced in their session can scarcely be considered impertinent. Lamentable as this would be, it would be comparatively less when viewed not only with regard to the less number affected, but also with regard to the greater mental power attained for subsequent pursuit of study through the character of the good foundation laid in the preceding grades. The entire enrollment in the eight grades of schools below the high school was last year 11,833, of which 8,478, or 71.6 per cent, were enrolled in the first four or primary grades. It is thus seen that the enrollment in these lower grades, which are so seriously affected by the want of adequate accommodation, is about as 5 to 2 in the higher grades.

The schools of the lower grades are more wholly the schools of the people—the schools in which the training of the masses begins and ends—the schools of those who constitute the great body of the community. This fact alone should be most potential toward securing for them every facility for attainment through proper length of session for instruction.

A statement showing the number of pupils enrolled in each of the eight years or grades of schools below the high school, with the per cent of the entire enrollment in each grade, may prove interesting, if not useful, in future effort at betterment of existing conditions. There were enrolled, in the first grade, 3,135; in the second grade, 2,050; in the third grade, 1,777; in the fourth grade, 1,516; in the fifth grade, 1,254; in the sixth grade, 924; in the seventh grade, 677; in the eighth grade, 500. The per cents of this entire enrollment in these eight grades were, beginning with the first, respectively, as follows: 26.5, 17.3, 15.1, 12.8, 10.6, 7.8, 5.7, and 4.2. The difference between the enrollment in the two grades representing the extremes is very marked.

If these grade enrollment per cents are sufficiently uniform for a considerable period of time, then it may be said with sufficient degree of approximation to exactness that of every six pupils enrolled in the first year of school life five leave school before completing the eighth year of the elementary course. Again, with extremes less removed from

each other, as is found in the institution of a comparison between the enrollment in the first and that in the fifth year, marking the beginnings of what are usually designated the primary and grammar grades, there is presented a difference less marked than in the first comparison, yet sufficiently so to enlist attention. In the comparison of the enrollment in the fifth year or grade with that in the first the latter is two and one-half times the former; that is to say, that of every five pupils who entered the first year or grade the school life of three is ended before the completion of the fifth year of the elementary course of instruction.

These grade enrollment per cents may vary somewhat within a period of eight years, but actual tests will show that they will not vary sufficiently to affect materially the purpose for which they are now used. The 500 pupils enrolled in the eighth grade last year may be said to be, and with possibly few exceptions are, the remnant of those pupils who in the school year 1891-92 were enrolled in the first grade. In that year 3,260 pupils were enrolled in the first grade. In 1898-99, the year in which these pupils should, by normal steps, reach the eighth grade, there were only 500, or less than one-sixth of those who were in the first grade. Or, taking the 1,254 pupils in the fifth grade last year and tracing them back to the year 1894-95, we find that there were enrolled in the first grade that year 2,824 pupils, or, wanting 124, three-fifths more.

This too limited fractional attendance is the result of social conditions—conditions whose remedy is not within the province or control of the public school; therefore there is little or no hope for early appreciable betterment looking toward longer enjoyment of the privileges offered by it. Its concern must be directed toward affording the intensest and fullest enjoyment of the privileges possible within the limited periods of their acceptance.

The facts indicated by the figures in the several grade enrollments forcibly suggest that, inasmuch as the schools of lower grades have the largest embrace of the school population, the mission of the public school can not be completely fulfilled short of such provision for and attention to them as will contribute most toward due preparation for life.

The average number of pupils to the teacher, on the average enrollment, was for the primary grades 37.8 and for the grammar 36.9. The average for the eight grades below the high school was 37.6. This average was three less than in the previous school year. The decrease was due to causes stated under attendance, by which the average enrollment for the year was affected. In my opinion this average to the teacher is sufficiently large for schools with reduced session, and particularly for those whose session is restricted to the afternoon. This opinion is based upon the fact that there is less time permitted for individual attention in all schools of this class and greater demand for such attention during the later hours of the day, when mental energy is on the wane.

The advantages of closer supervision and larger attention to the work of the schools of the first three grades, through the director of primary work and her assistants, are already apparent. The effect of this provision upon the character of the work in subsequent grades, through the better foundation here permitted, can not be otherwise than beneficial. Sufficiency of time has not yet elapsed for the attainment of its full fruition.

In the schools as a whole the constant aim was to make the teaching thorough and exact, through the employment of means by which interest is created, attention fixed, curiosity aroused, and thought awakened and stimulated. As a result the work was generally satisfactory. In the few instances in which it was not the too limited time afforded by the reduced session was a large contributing cause.

DISCIPLINE.

The discipline of the schools as a whole during the year was very satisfactory. Resort to the punitive means permitted by the rules and regulations, through suspension from the privileges of the schools, infliction of corporal punishment, and dismissal from the schools, favorably compared with that of past years.

The cases of suspension were eighty-seven, or sixty-two less than in the previous year. The cooperation of parents and guardians, which, as a rule, is hearty in its character, sought through this means, is recognized as a factor both in the promotion of the interests of the offending pupil and in that of the efficiency of the schools. The interview presents the opportunity for such discussion of his conduct in its present aspects, as well as in its tendencies, as in bearing upon his future conduct may prove a profitable lesson in life.

The cases of corporal punishment, which, as usual, represent a larger number than that of the different pupils who received this punishment, were twenty-five, or three less than in the previous year. No case in which severity of infliction was charged arose. In most schools there is entire disuse of the rod as a means of punishment and in others its use is of rare occurrence. It is largely recognized as evidence of lack of ability on the part of the teacher to secure good condition by less objectionable and more judicious means. The statistics of the schools for years extending back into the past show that its continuance as a means of discipline is limited to a comparatively few teachers.

As the same pupils are rarely continued year after year under the instruction of the same teachers, and as the pupils transferred by them to others give little or no trouble to the teachers to whom transferred, it is reasonable to infer that the difficulty is not wholly with the pupils. It is possible, and even, in instances, probable, that the teacher is more in fault than the pupils, even to the cause of the offending. By frequent resort to this means of punishment it can have so demoralizing effect upon the teacher that she, becoming, in obedience to a law of

human nature, so insensible to the suffering produced, is rendered less and less capable of measuring it.

The discipline of the schools as a whole emanates from the interest produced and maintained in the studies pursued, through the methods employed, from appeals to the higher motives, from the systematic and orderly regulation of the details of the schoolroom, and from the character of the influence and personal example of the teacher.

The excellent character of the discipline of the schools is forcibly suggested by the rareness of resort to dismissal from the schools. In a period of fourteen years, with a range in the dismissals from zero to nine, and with an average of four to the year, there is suggested large degree of efficiency of means by which children from all classes of the population are retained in the schools. And this record is further heightened by the fact that permanent dismissal from the schools is almost wholly unknown, the cases being almost entirely of such character as to permit, with due regard to general interests, readmission at the beginning of the next school year.

In the following table are presented the cases of corporal punishment, suspension, and tardiness in each school year during the last fourteen years and the number of cases to every 100 pupils of the average enrollment; also the number of pupils dismissed from the schools during each year of the period:

[Normal School not included in this table.]

Year.	Average number of pupils enrolled.	Corporal punishment.		Suspensions.		Number of pupils dismissed.	Tardiness.	
		Number of cases.	Number of cases to every 100 pupils.	Number of cases.	Number of cases to every 100 pupils.		Number of cases.	Number of cases to every 100 pupils.
1885-86.....	8,191	159	2	250	3	3	3,906	47
1886-87.....	8,488	110	1	187	2	4	3,345	39
1887-88.....	8,754	78	.....	226	2	9	3,720	42
1888-89.....	9,049	94	1	267	2	8	3,868	43
1889-90.....	9,250	70	.....	244	2	5	3,913	42
1890-91.....	9,679	93	.....	210	2	8	3,714	38
1891-92.....	9,915	110	1	183	1	5	4,109	41
1892-93.....	10,072	102	.....	130	1	2	4,482	44
1893-94.....	10,116	65	.....	156	1	4	4,186	41
1894-95.....	10,021	44	.....	162	1	2	4,597	45
1895-96.....	10,266	75	.....	160	1	4	5,204	50
1896-97.....	10,391	38	.....	139	1	1	5,327	51
1897-98.....	10,523	23	.....	149	1	0	5,543	52
1898-99.....	10,102	25	.....	87	0	2	4,108	40

HIGH SCHOOL.

The whole number of pupils enrolled in this school during the year was 678, of whom 250 were admitted by promotion from the eighth grade. The decrease in the entire enrollment from that of the previous year was 12.

The average number of pupils enrolled was 586 and the average number in daily attendance 559. The per cent of attendance, based on the average enrollment, was 95.3, or 0.2 less than that of the previous year. Though less than that of the average for the elementary schools of these divisions, it will be seen to be very favorable, either absolutely in itself or relatively with that of the other high schools of the District, in view of the fact that, as this is the only school of this character in the entire District for this school population, there is much less degree of accessibility offered to those attending it.

With the very few exceptions in the admissions from high schools of other places, the eighth-grade schools of this system of schools are the sole feeders of this school. In 1892, at the time of the occupancy of the building used by this school, there were eight eighth-grade schools. At this time there are twelve eighth-grade schools, exclusive of those in the first eight divisions, which forward their graduates to this school. In this increase of 50 per cent since 1892 the capacity of this building has been so overtaxed as to have resulted, after the conversion of one of the only two study halls into class rooms, in the taking of four school-rooms in a building constructed for grade schools in which to accommodate the excess of pupils over the provision in the high-school building. This occupancy of the rooms of the grade schools has not been without ill effect in increasing the number of grade schools, with session reduced to half time.

It is possible that relief from these unfavorable conditions for most efficient work will be had after the erection and occupancy of the new manual-training school in the large inducement offered through ample facilities afforded for proper pursuit of the technical course. By the means of the diversion thus created it is believed that the number electing that course will be sufficient to reduce the pressure upon the high school to the limit of comfortable accommodation in the high school building for all that may prefer the courses offered by this school.

The number of teachers employed in this school, including the principal, was 29, of whom 19 were male and 10 female. The former constitute 65.5 per cent of this corps. The ratio of male to female teachers is about 2 to 1, while the ratio of girls to boys in the average enrollment of pupils is about 7 to 3.

In my last report I spoke of the advisability of securing greater experience than has usually obtained in the selection of teachers for the vacancies occurring from time to time in this school and for the new teacherships required by its growth. I would again call attention to it, and would especially emphasize its importance as a necessity for the attainment of the most efficient results. The time has passed for compulsory reliance simply upon collegiate attainment. Both experience and liberal attainment or scholarship can now be obtained for the teacherships. This school can not do the work it should do until successful experience is made a prime requisite in the employment of its teachers.

The following table shows the absolute and relative growth of this school during the last fifteen years, giving the number of teachers employed, the entire enrollment of pupils, the number of each sex in the enrollment, and the number of graduates:

Year.	Number of teachers.	Whole enrollment.			Number of graduates.
		Boys.	Girls.	Total.	
1884-85	4	22	150	172	28
1885-86	6	37	210	247	33
1886-87	8	51	225	276	39
1887-88	9	73	288	361	51
1888-89	11	81	335	416	67
1889-90	12	64	281	345	41
1890-91	14	82	294	276	86
1891-92	17	104	303	407	69
1892-93	18	117	327	444	90
1893-94	19	140	320	460	99
1894-95	22	197	421	618	131
1895-96	24	198	477	675	49
1896-97	26	215	521	736	79
1897-98	27	220	470	690	103
1898-99	29	199	479	678	92

The commencement exercises of this school were held on the evening of June 20, 1899. The graduating classes numbered 92, of whom 41 were from the academic, 39 from the scientific, and 12 from the business course.

By special action of the board of trustees, all pupils graduating from the academic and scientific courses were made eligible for admission to the Normal school at its reopening in the current school year. The effect of this action, if permanently established, upon the scholarship of this school, in practically removing the competition that has hitherto prevailed, through the restriction of the number to the twenty-six with best record, is a question of interest, and one for time to decide.

The detailed work of this school during the school year is quite fully presented in the report of its principal to this office, which is herewith submitted, and your attention respectfully invited to it.

NORMAL SCHOOL.

The whole number of pupils enrolled in this school during the year was 70, of whom 57 were female and 13 male. Twenty-five of the entire enrollment had the first year's training in the previous school year. The admission of the remaining 45 was determined by their high-school scholarship record and an examination held June 4, 1898. The increase in the enrollment over that of the previous school year was 14. The average number of pupils enrolled was 69; the average number in daily attendance 69.

The rule restricting the annual admissions to this school to the twenty-six excelling all other eligible candidates, in the combination of the high school and examination records, was, by action of the board of trustees, suspended, and all eligible candidates whose per cent was

not less than 80, as determined by the high-school record and the examination, were admitted to this school at its reopening in September.

The further departure from the rule in the current school year, in the admission of all graduates from the academic and scientific courses of the high school to this school, though in my opinion strictly logical, if there be departure from the rule, is looked forward to with concern and interest. It virtually does away with the examination, which, if the intellectual only is to be considered, matters not, since sufficient scholastic attainment can be effected through the high-school training. Though a requisite intellectual qualification is only one of the essential qualifications, the physical and the moral are indispensable in the make-up of the true teacher. It may be said that these qualifications may be determined while in training. It is true, and it is also admitted that the training will afford in instances better opportunity for more nearly exact determination.

But the sense of injustice that would naturally result from the loss of time in training, time which might have been devoted to some pursuit, or preparation for it, for which there is aptitude, upon the discovery of too great lack of qualifications for the teachership, which might have been ascertained with reasonable degree of accuracy before entering upon the training, makes it unwise if not inexpedient.

This school at the beginning of the school year was removed from the Magruder to the Miner school building. The removal was made necessary by the want of larger accommodation than that afforded by the former building. Space sufficient to have all the nine practice schools, composed equally of first, second, and third grades, assemble in the forenoon, by which the practice work of the pupils of the Normal school would be facilitated, was not afforded by the former building. More accommodation was also needed on account of the larger admissions to the Normal school.

The occupancy of this building was attended with some inconvenience in the lack of ample and proper closet facilities. Other improvements were also needed by which a larger degree of comfort and convenience would have been insured.

On the evening of June 20, 1899, the pupils who had satisfactorily completed the course were graduated. The graduating class numbered twenty-five, and the exercises were held jointly with those of the high school.

The report of the principal of this school is herewith submitted.

KINDERGARTENS.

The first public kindergartens in these divisions were opened October 10, 1898, and continued in session until June 1. There were in all six, two in each of the three divisions. They were located as follows: One at the Magruder building, M street, near Seventeenth northwest; one at the Phillips, N street, near Twenty-eighth northwest; one at the Patterson, Vermont avenue, near U street northwest; one at the Douglass,

First and Pierce streets northwest; one at the Lincoln, Second and C streets southeast; and one at the Payne, Fifteenth and C streets southeast.

In estimating the amount of money required for the full equipment and operation of a kindergarten, the rent of a room was one of the items included. It was included to prevent the occupancy of a school-room, by which occupancy the session of a grade school would be reduced to half time. The estimates were made to maintain one kindergarten in each division of the public schools. As these schools embrace three divisions, the number of kindergartens estimated for was three. Instead, however, of limiting the organization to this number, it was extended to six, or two kindergartens for each division. This action seems to have been dictated by the desire to embrace in this provision a larger number of children than could be embraced by three.

The amount required for the payment of the six kindergarteners' salaries to May 31, inclusive, drew so largely upon the appropriation for this department of public school effort that there was not left money sufficient to continue the term of the kindergartens to the close of the school year, nor, through full and proper equipment, to give to them that environment so essential to their success. Had the number been restricted to that of original intention, or even to four, in event of opportunity to use one or more graded schoolrooms not at the expense of reduced session to the graded schools, there would have been permitted to them not only due facilities as to full length of term and as to complete equipment, but also such location with regard to density of population and needs as would have insured larger enrollment of children.

In view of the experience of the past year, consequent upon the too great diffusion of the provision made for this department of the system, consistent with best results, there should not be organized in these three divisions more than one new kindergarten, to the end that it may be fully provided for and that the equipment of the six organized last year be completed; and that, to the extent the appropriation will permit, assistants to the kindergarteners may be employed. There should also be such change in the location of any of the existing kindergartens as may be suggested by the presentation of opportunity through which better results may be promised.

The entire enrollment in the kindergartens, which was restricted to children 5 years of age, was 213. The average number enrolled was 116; and the average number in daily attendance 99.

The kindergarten with least attendance was the one located at the Payne building, corner Fifteenth and C streets southeast. This building is situated in a section of the city in which the residences are widely apart and many of them considerably distant from the school building. The streets and sidewalks are largely unpaved, and in such condition during the inclement season of the year and inclement periods of the other seasons, as, in going to and from the building, to offer much difficulty even to the larger and older children in attendance at the graded schools there located.

The enrollment in this kindergarten was quite small and the attendance very irregular. Omitting it, the averages, both in the enrollment and in the attendance, to the other five present numbers by many considered sufficiently large to one kindergartener for most effective training. Including this kindergarten the average to each of the six in the entire enrollment, in the average enrollment, and in the average in daily attendance were, respectively, 35.5, 19.1, and 16.15; excluding it, the average in the same items were, respectively, 36.2, 20.8, and 17.8.

In the employment of assistants there will be little or no reason for restricting the enrollment to children of 5 years of age. In the admission also of those who are 4 years old a larger enrollment will follow, even in the more sparsely settled sections, in which kindergartens may be located.

The value of this training to the child of whatever condition is great. To very many of the class which the kindergartens of these divisions should embrace it is inestimable; not only through its inclusion of more years for public effort, but in its large opportunity through its reach down to that more plastic period of life for imparting correct bent. What the home should give, but in its want of opportunity, or, what is worse, in its incompetency can not give, may here be largely supplied. Our public school system will be more nearly complete and will more nearly fulfill its mission when ample provision shall have been made to embrace within its effort all children of the ages to which this training is peculiarly adapted.

The difficulty experienced in procuring persons both by training and experience to take charge of kindergartens in these divisions was very apparent in the examinations. It strongly emphasizes the importance of early public provision through a special training school or, as the training is largely in common, through a department in the normal school, in which such differentiation from the course therein pursued may be made as may be necessary to secure the end. Such uniform general training could be made to solidify and systematize effort along this line.

The following presents in tabulated form the whole number enrolled, the average number enrolled, and the average number in daily attendance in each kindergarten and for the kindergartens as a whole:

Kindergartens.	Whole enrollment.	Average enrollment.	Average attendance.	Per cent of attendance.
Ninth division:				
Magruder.....	30	22	19	87.5
Phillips.....	38	23	20	87.9
Tenth division:				
Patterson.....	43	21	17	82.3
Douglass.....	38	20	17	85.3
Eleventh division:				
Lincoln.....	32	18	16	90.0
Payne.....	32	12	10	83.0
Total.....	213	116	99	86.2

TEACHERS.

The corps of teachers, with few exceptions in the new teacherships and in the old, in which vacancies were created by resignation or otherwise, was the same as that of the previous school year. The retention of teachers, which varies but slightly from year to year, insures to the schools the positive advantages accruing from long successful experience. This experience is especially valuable on account of the large degree of special training and preparation with which it is associated. In what is known as the regular teacherships, or those of the eighth grades of elementary schools, there were 210 graduates of normal schools who constituted 84 per cent of all filling such teacherships, and though the remaining teachers of the graded schools had not had the special training in a normal school, they were well fortified by yet longer experience, made successful and efficient through long study and careful observation. Not alone is this large general experience very valuable in efficacy of results, but yet more is the long-continued local experience, in the extended opportunity it affords for fuller comprehension of unfavorable conditions and for intelligent institution of the means essential to their betterment.

The whole number of teachers employed during the year was 334, or 16 more than in the previous school year. Of the whole number of teachers 54 were male and 280 were female. Their distribution among the different classes of schools and special departments was as follows: In primary schools, or those embracing the first four years or grades, 172; in grammar schools, or those embracing the second four years or grades, 78; in high school, 29; in normal school, 7; in kindergartens, 6; in special subjects and departments, and not permanently in charge of any school or class, 62.

The average salary to the teacher in these three divisions of the public schools was \$649.69, which was less than that of the average to the teacher for all the public schools of the District. If the average to the teacher in these three divisions more nearly approached the general average for the District, opportunity would be afforded to satisfy the reasonable demands of many teachers in the high school and along the several lines of special and industrial work, in which there is no determining schedule as for the graded schools.

The absence of teachers from their schools, in days, was 1,021.5. There is generally ill effect upon the school from any degree of irregularity in the teacher's attendance. The degree of effect is determined largely by the degree of efficiency the substitute teacher brings to the position. The large draft upon the better class of substitutes of previous years, who were graduates of the normal school, for filling the vacant and new teacherships last year, on account of the absence of a graduating class from the normal school the year before, made it difficult at times to give to the schools the good substitute service of previous years; con-

sequently there was more or less ill effect upon the school from the teacher's absence, when this class of substitutes could not be obtained, which was intensified by prolonged absence.

The year was saddened by the death of Henry P. Montgomery, late supervising principal of the ninth division of the public schools of the District of Columbia, which occurred April 26, 1899. Mr. Montgomery's services in these schools began as principal of the John F. Cook School February 1, 1879, which position he held until July 27, 1882, when, through the consolidation of the four different boards of trustees for public schools in the District into one board, the public schools for colored children residing in the cities of Washington and Georgetown were designated as the seventh and eighth divisions of the public schools of the District of Columbia, and a supervising principal appointed to each division. He was appointed to the former, which, in the subsequently changed designation due to an increase of the divisions, became the ninth division, and held it to the hour of his death. The services of Mr. Montgomery, both as principal and as supervising principal, were eminent in their character. In the discharge of the various duties of the position he was earnest, thorough, conscientious, and faithful.

NIGHT SCHOOLS.

There was no increase in the number of night schools. These schools were located in seven buildings. Two of these schools were in the ninth, two in the eleventh, and three, including the business night school, in the tenth division, and so located as to afford to the more densely populated sections of the divisions fair degree of accessibility. Their number is too limited, however, either to give to most of the sections sufficient accommodation for all desirous of attending them or to afford reasonable facilities for many in the sections of the division more or less remote from them.

The business night school was removed from the Garnet to the Douglass building, for the same reason that it had, in a previous year, been removed from the Stevens to the Garnet, namely, to permit greater facilities for typewriting, through the opportunity afforded for greater practice by the use of the typewriters of the business department of the day school. The experience of the term, however, showed in the lessened enrollment, due apparently to the considerably greater distance from the residences and places of employment of many of those qualified for this school, that the Stevens building offers the best location for this school. When located there the pressure for admission to it was too great to accommodate all applicants.

The whole number of pupils enrolled in these schools during the term was 1,384.* The average number enrolled was 772, and the average number in nightly attendance, 593. The per cent of attendance based upon the average enrollment was 77.1. The enrollment, though*

in most of these schools sufficiently large for most effective instruction, was not so large as that of the previous year. The average number to the teacher on the entire enrollment was 55; on the average enrollment 30; on the latter it was 6 less than in the previous year. It was the lowest average to the teacher within the last five years.

The disparity between the entire and the average enrollment was large. It may indicate the measure of the teacher's power or influence to hold. If pupils once enrolled are held, the efficiency of the teacher is reasonably shown, and this is particularly so with respect to adults, whose large experience in life favors quick and generally accurate judgment.

There were employed for these schools 25 teachers, of whom one, the principal of the business night school, was drawn from the day school corps. Of these teachers 3 were male and 22 female.

Perhaps for no other department of public school effort is better judgment in the selection of teachers required than for this department. There is need here not only of good and sufficient degree of scholastic attainment, but of that degree of successful, tactful experience which inspires in the pupil confidence by convincing him that there is brought by the teacher to the work due qualification for accomplishment in all its aspects. For adequate result it should not be considered sufficient simply to appoint as teachers of these schools high-school graduates with little or no experience or those of less scholastic attainment with experience the character of which is largely, if not wholly, unknown. In the at best too meager time for scholastic attainment on the part of the adult pupil the teacher should not seek here opportunity for acquiring an experience whose possession should have been considered a requisite for employment.

This service demands for its most successful accomplishment the best, whether in scholastic attainment, general information, degree of successful experience, or, in a word, of qualifications, both natural and acquired, to interest, hold, and sway. If such teachers can not be obtained outside the day-school corps, that corps, in my opinion, should be drawn upon whenever it can be done without offering injury, in the additional labor and responsibility imposed, to either the day or night school service.

The practice of employing largely the day-school teachers in these schools, and especially in the principalships and in such subordinate positions when otherwise the desired ability could not be obtained, which prevailed for years prior to the last year, is, in the impossibility of obtaining as able service from the outside, undoubtedly most conducive to the interests of these schools. It is in recognition of this possibility for most efficient service that the appropriation act specifically permits such employment. Any departure from this practice, except upon attainment of equal ability from other sources, must result

in the loss of the prestige gained in preceding years, and sooner or later seriously affect their welfare.

If there be judicious availment of the means largely at hand for securing an excellent teachership, the results, whether in attendance, in scholastic attainment, or in general training, will be constantly improving; for nothing in the past has contributed so materially to the large enrollment, excellent attendance and discipline, constant progress and growth of these schools, as the character of the teachership. It is safe to say that if the excellence of this be not vigorously maintained deterioration must inevitably follow.

Night schools among this population, in offering as they do the opportunity denied by the circumstances of the past and to many the only opportunity for knowledge of the letter, mean much. Through the removal of illiteracy in the homes from which come hundreds of their offspring into the day school made possible by this provision, the home, in being brought into appreciative touch with the public school effort, may be made a potential auxiliary in effecting results which in its present condition are impossible.

These schools were opened October 10, 1898, and closed February 10, 1899, inclusive. The term embraced forty-five evenings of two hours each, except for the business night school, which had forty-three evenings of two hours each. The meagerness of the time was not without discouraging effect upon those who availed of it. The great interest shown in these schools and the good degree of attainment wrought, even in these entirely too short terms, bespeak the earnest craving for knowledge and for the betterment of intellectual and moral conditions. These seekers after knowledge, and many under much difficulty, should be encouraged by larger appropriations, by appropriations sufficient for their maintenance from October 1 to April 1.

As these schools are not sufficient to embrace all desirous of attending them, others should be organized and so located as to promise most good. They could, under efficient organization, be made to do much, not only intellectually, but morally, in their tendency to divert from objectionable pursuit and employment of time, and thus made to contribute much to the betterment of the sections in which they may be located.

The amount appropriated by Congress for the support of the night schools of the District for the year was \$7,000, of which \$500 was for the contingent expenses. Of the entire amount \$2,411.75 was allowed for the instruction and maintenance of the night schools for colored in the city. This allowance was \$181.10 more than that of the previous year. It permitted a longer session by three evenings. It was not sufficient, however, for operating the schools a number of evenings equal to that of the night schools of the other divisions of the public schools.

The following table gives, among other items, the entire enrollment, the average enrollment, the average attendance, the number of teachers employed, and the cost of instruction in each of the seven schools, as well as in all:

	Whole enrollment.	Average enrollment.	Average attendance.	Per cent of attendance.	Time.		Number of teachers.	Average number to the teacher. (a)	Cost per night.	Entire cost of teaching.
					Number of nights.	Number of hours.				
Stevens.....	252	119	88	74.4	45	90	5	43	\$9.75	\$438.75
Wormley.....	107	62	49	78.7	45	90	3	20	6.25	281.25
Garnet.....	171	113	86	76.6	45	90	3	37	6.25	281.25
Cook.....	272	161	125	77.5	45	90	4	40	8.00	360.00
Douglass.....	73	28	20	73.4	43	86	2	14	4.50	193.50
Lincoln.....	194	125	89	71.0	45	90	4	31	8.00	360.00
Randall.....	315	164	136	82.9	45	90	4	41	8.00	360.00
Total.....	1,384	772	593	77.1	44.7	89.4	25	30	50.75	2,274.75

a Based on the average enrollment.

MANUAL TRAINING.

In its extent the accommodation for this training is sufficient to embrace the grades of schools for which it was provided, though it is insufficient to afford reasonable degree of accessibility to all classes. Considerable inconvenience is imposed upon schools in each division whose locations are remote from the building in which the shop is located. This is particularly so in the eleventh division, in which several of the schools are more than a mile distant. As the training, however, is given to each class but once a week, this inconvenience is cheerfully endured.

The shops in wood are located in the Miller, Stevens, and Randall buildings. The first named contains also the shops in metal working, and in both wood working and metal working affords facilities for the instruction of two classes at the same hour. The Stevens and Randall shops have facilities at one period for instruction each for a class of twelve, or about one-half of a class in the graded schools. This necessitates the division of the class of the graded school into two sections, which require different periods of time for their instruction at the shop. It occasions almost constant complaint, since it results in considerable loss of time to the regular school through the necessity for the repetition of instruction to the absent section of the class on its return from the shop. This condition is not restricted to the shop for wood working, but it also exists in the facilities for cooking, and for sewing, where it is done in the shop.

The remedy lies in the doubling of the facilities for instruction at the shops, by which instruction can, during the same period of time, be given to a number equal to that in a class of the regular school. Though increased facilities imply additional plants and utensils, it

need not imply increase of teaching force, since the present force could be required to move from place to place in the giving of instruction to classes.

The shop in metal working, though quite remote from many of the schools, is yet sufficiently central to afford relative degree of accessibility. In point of accommodation it is sufficient for those for whom this instruction has been provided. In equipment, though not complete, it offers good degree of facility for accomplishment along the lines of instruction it affords.

The number of boys who received instruction in wood working during the year was 839, and the number receiving instruction in metal working, 131. The number of girls who received instruction in cooking was 838, and the number who received instruction in sewing, 2,826, of whom 470 were instructed in cutting and fitting in the shops. The whole number of boys who received instruction along these special lines was 970, and the whole number of girls, 3,265, presenting an aggregate of 4,635 pupils in the enjoyment of privileges in this department of public school effort.

The work of the year in each of these departments was generally satisfactory. The instruction continues with good degree of interest among the pupils, and with excellent effect upon the regular studies in which the same mental faculties are more or less exercised and through the recreation afforded by the temporary relief from the more purely intellectual requirement.

During the second session of the last Congress it was decided to give to these divisions a manual training school, to cost with site not more than \$150,000, of which amount \$50,000 were made available at the beginning of the current fiscal year. A site, with a frontage of 225 feet and a depth of 135 feet, on P street between First and Third streets northwest, has been purchased, at a cost of \$15,187.50. This site is well situated with respect to degree of accessibility from all parts of the city. Since the site was purchased, a design for the building has been selected by the Commissioners of the District of Columbia from those offered by the several architects competing for it. Other necessary preliminaries to the act of construction are now in progress, and due means are being taken for the realization of the object of the appropriation.

Very respectfully,

G. F. T. COOK,
Superintendent of Schools.

THE BOARD OF TRUSTEES,
Public Schools, District of Columbia.

NINTH DIVISION.

WASHINGTON, D. C., *June 30, 1899.*

DEAR SIR: Herewith is handed a report of the schools of the ninth division for the session of 1898-99. My short connection with the division precludes any extended account of the schools and work. Called

to the post May 1, 1899, I attempted to pay short visits to all the buildings and schoolrooms within a brief period to gain some conception of the character of work being done. Everywhere the utmost harmony was observed, work was moving on, and most excellent order prevailed. The teachers seemed to vie with each other in the discharge of duty, as if to compensate for the absence of one who had labored so long and faithfully with and for them. There was nothing to do but to fall in and keep step to the music of work and progress everywhere so conspicuous.

BUILDINGS AND ACCOMMODATIONS.

Eight buildings are found in the division, seven owned and one rented. The rented building, Miner, is used for the normal school. Here are found nine practice schools from the first to third grade, inclusive. These buildings, under the care of faithful and intelligent janitors, are well kept. The lighting and ventilation are good. The walls in quite a number of buildings should be calcimined to relieve dinginess and appeal to the æsthetic sense. The heating apparatus in Wormley is inadequate. Even in ordinary winter weather the schoolrooms were imperfectly heated. Much suffering and inconvenience resulted. To prevent a recurrence and preserve health, new furnaces should be put into this school building.

The number of schoolrooms aggregated 76—67 owned, 9 rented. Ninety-two schools occupied these rooms, 60 being whole day and 32 half day. The lack of accommodations in Briggs school caused the transfer of a fifth grade to Stevens, thus forcing children to walk many blocks to reach school. This increased absence and tardiness.

ATTENDANCE.

The whole number of pupils enrolled during the year was 4,111. The average enrollment reached 3,325. The average daily attendance was 3,117. The percentage of attendance for the entire school year was 93.8. These statistics indicate the estimate in which the schools are held by the people, and measure the stupendous effort put forth by them to have their children enjoy the benefits so generously spread out before them.

SCHOOL WORK.

The latter part of May tests were given in the last 4 grades, embracing the subjects of arithmetic and language. These tests were merely to suggest what and how to the teachers. But they also in a sense measured the power of the different schools in these two vital subjects, and enabled the teacher to ascertain the strength and weakness of the individual as well as of the entire class.

TEACHERS.

The enthusiasm of the teachers touched the great body of learners, and interest shone out everywhere. The teachers held meetings each month to talk over the work, to devise ways and means of helping

on the cause of instruction. From these gatherings each departed strengthened by all the good things all the others had thought out or sought out and brought to the general conference.

These round-table discussions informed and inspired, and the work went on quite evenly throughout the division, so that a pupil transferred from one building to another lost nothing but fitted quickly and aptly into the new class. This unifying the instruction and system is valuable, for it puts the strength of all into each and makes the teachers realize that they labor not alone or in vain but are a part of the grand army of education.

Hearts ready and willing are daily doing the work that is telling in the lives of the children. Their gracious and saving influence is not hemmed in by the narrow confines of the schoolrooms but follows and enswathes and abides with the pupils as they pass along the street and dwell in their homes. Quickly and quietly hundreds of children depart from the vicinity of the schools on dismissal and are swallowed up in the great mass of pedestrians without causing criticism and winning high praise for their modest self-control in public. Even did these thousands of children get nothing but such a spirit from their teachers and the schools the community would receive an uplift of inestimable value.

SCHOOL LIBRARIES.

In every building is found a library which has been secured by the efforts of teachers and pupils through concerts and other entertainments. Each year additions are made to the collections, showing that this important adjunct to the system is not neglected.

The reading habit must be created and fostered among the pupils if they are to secure the greatest good from their school life. Reading properly and judiciously done enhances thought all along the line. It should be under the direction and guidance of the teacher. The thought gained in the study of the various subjects of the curriculum must be related, expanded, intensified by reading literature bearing on these central subjects taught in the schoolroom. Books of travel, stories of science, poetry, myths, history, novels—the very best in literature—should be placed in these libraries for the pupils. The teachers ought to know what books are in the library, and, above all, what is in the books. In the mastery of the essential subjects all read for each and each for all. By focusing effort, by correlating, concentrating, energy is economized and time saved. Time and effort must not be frittered away by haphazard, promiscuous dabbling in various unrelated subjects. Even in the elementary schools the learner may be led to see that the kingdom of knowledge is one, and upon the “indefatigable wings” of interest he pursues his way from strength to strength. Thus the “burden” of learning becomes “light” and its “yoke easy.”

SHOE AND EVENING STAR FUND.

The teachers realize that many of their pupils have physical needs, and that to feed the hungry and clothe the naked is part of their work in the struggle to better the condition of the community. By concerts and other means the several buildings have provided a "shoe fund," by means of which the most needy and deserving children attending school are assisted during winter weather. They are thus enabled to continue in school. The money so generously given by the Evening Star was used in helping families in seasons of sore distress.

The personal inspection and visitation by teachers among the homes of the people bring all into close connection with the public schools, and the great mass of the people see that the school stands to-day the most potent and blessed influence at work in the community.

KINDERGARTENS.

Two were organized and set in operation last year as a part of the great public-school system here, in Magruder and in Phillips. The interest in these schools is growing apace in the minds of many who look upon them as good places for the little ones whose mothers are earning bread. But they are not to be day nurseries. To be of value to the educational system these schools must be properly developed and used. The first desideratum is good kindergarten teachers, for the material is too precious and impressionable to be placed in unskilled hands. The proper development of body, mind, and soul demands artists, women of "culture, refinement, and technical skill." Here in these schools above all must be secured purposive efforts, best conditions of learning, and economizing of energy.

In April, Mr. Henry P. Montgomery, for nearly seventeen years supervisor of this division, passed away. The universal sorrow among teachers, pupils, and citizens testified to the high appreciation in which he was held by the community. His monument is the noble work done, the grand example set, the exalted character shown in the discharge of duty.

CONCLUSION.

To the teachers, janitors, and children of the division, I return most hearty thanks for the warm welcome extended, and to the trustee and yourself gratitude for advice and courtesy.

Respectfully,

W. S. MONTGOMERY,
Supervising Principal.

Mr. G. F. T. COOK,
Superintendent of Schools.

ELEVENTH DIVISION.

WASHINGTON, D. C., *June 30, 1899.*

DEAR SIR: Agreeably to your request, my third annual report of this division of the schools is herewith submitted. The statistical report has been elsewhere presented.

The year has been spent in closely observing the methods employed in the class rooms by the different teachers, in order that the rule which requires the supervising principals to make it a special object to improve the methods of instruction should be properly and intelligently carried out.

The thought is constantly impressed that the instructor is a guide rather than a lecturer, and that the subjects taught must be treated concretely and inductively. Most printed work being abstract rather than concrete, deductive rather than inductive, the teacher is urged to make good these deficiencies. No attempt is made to have every teacher adopt the same particular method in developing a lesson, but each and every one is urged to be full of resources, devices, and information.

READING.

To read the lesson intelligently and intelligibly is the task imposed upon the pupils, the teacher's questions being few or many according to the difficulty of the passage and the comprehension of the pupil. Phonic analysis in the lower grades is employed to improve the child's habits in articulation and pronunciation. It is questionable whether any systematic efforts in this direction are more efficacious than good example and frequent correction. Yet when the three are combined the greatest amount of good is obtained. The ready and agreeable oral interpretation of the text is the end of voice culture, so far as the reading lesson is concerned, in the lower grades. Appropriate inflection and modulation are determined by the sense and not by general rules, and the pupils are led by suitable questions to perceive and appreciate the relation between appropriate expression and intended meaning. Frequent exercises in sight reading are given, and when the selection is properly made the interest is usually keenly manifested. In correcting errors, usually miscalled words are written on the blackboard for thorough treatment after the pupil has finished reading. In this way the reading is not interrupted and the chain of thought broken, but the true form is made more emphatic and the child who has erred has more time to think of the word or words than of himself as the thing corrected. The object of all correction in reading is to stimulate the pupils to look for and enjoy what is good in the matter presented.

GEOGRAPHY.

Beginning with the schoolroom and its immediate surroundings, excursions are made to near-by objects, such as a house in process of building, a lumber yard, or a planing mill; attention is called to the

heating apparatus, furnaces, coal and wood, noting their uses and whence obtained. In other words, the study of local geography precedes the more formal study of the text-books. The whole or general movement is from the home, school, and District outward, and is synthetic. The study and the making of maps are required in order that the pupils may realize the facts of surface and the proportion of parts. Careful and persistent effort is being made to secure the use of good English in the oral and the written work. A clear and strong imagination on the part of the teachers is one of the essentials in the proper oral presentation of this subject. With this qualification the teacher will be able to present word pictures which will be clear, vivid, and definite, and will cause her pupils to develop a like ability in themselves. In the upper grades a number of casually related objects are linked together and the common cause or causes noted, collateral information books are read, and reports are made in class upon the topics read. In the study of Europe and other continents comparisons are made with like things found in the study of America. When the resemblance is marked and not many new facts are to be brought out, a brief comparison with American topics is all that is required. Not much reference work can be accomplished outside of the class room, owing to the scarcity of books in the homes of the pupils.

KINDERGARTEN.

The establishment of the kindergarten schools was certainly a step in the right direction. Many parents are compelled to leave home every day to fill their places of employment, and their children between the ages of 4 and 6 were left without a proper care-taker. The training of these younger members of the family was left to chance, the street furnishing the playground and too often the viciously inclined the object lesson. Now, happily, this is being changed as the gentle spirit and wholesome influence of the kindergarten are brought to bear in our school work. The connecting link between the home and school seems to be found in the kindergarten. Instead of the vicious tendencies fastening their fibers around and in the life of the young child, we find the kindergarten instilling the virtues of truthfulness, industry, gentleness, courage, respect for the rights of others, loving obedience to authority, orderliness, and the ability to live and work with others without timidity, envy, or selfishness.

Physical qualities are learned experimentally by the use and constant comparison of things differing in material, size, density, weight, and color. The child is trained by actually performing the given work, which is one of the requirements of industrial life, and he is taught that all work is honorable and important in the kindergarten. He acquires an ability to think and to use language fittingly in describing what has been discovered. In taking into the kindergarten pupils 4 and 5 years of age there should be a division of the school into two

classes. Not more than the first three gifts should be given or taught pupils 4 years of age, while these and the more difficult ones should be taken by the pupils 5 years old.

ACCOMMODATIONS.

With the establishment of the kindergartens, each taking a school-room, the cry for additional accommodation becomes more imperative. The continuously increasing enrollment and the marked improvement in average daily attendance and other features of school routine, as shown from time to time by the monthly reports forwarded to your office, are indicative not only of the growth of the colored population in this city, but of a deepening appreciation of the work of the public schools. These gratifying results, which obtain and which give our records a favorable comparison with those of other public schools, are doubtless due in no small degree to that system in our organization which calls for careful supervision on the part of the various heads of the different departments of instruction. The cases of tardiness have become less year by year, until now there is seldom a case reported which, when investigated, will not show that its cause was through no fault of the child. The inference to be drawn from the statement here made is not that our schools have reached perfection or that an unusually large proportion of the children of the school population are enjoying the advantages offered, but that the schools have met with commendable success in securing prompt and continuous attendance and that the educational spirit among the masses of the colored population is in the right direction. There is still room for much improvement, and it is hoped that public opinion will avail still further to reduce the per cent of nonattendance. With the reconstruction of the Lovejoy building and the erection of a new building in the southwest section of the city the school accommodation will be ample for this section. These additions are urgently needed, as many of the schools are now running on half time, and a number of pupils are compelled to pass buildings and go to more distant ones in which they may get even this half-day training.

EVENING STAR FUND.

Through the kindness of the Evening Star Newspaper Company, during the month of February last the sum of \$200 was turned over to this division of the schools to be used in relieving the immediate distress of the destitute poor of this locality. As there were many children attending school whose feet were not properly clad, the money was equitably divided among the eighty-three schools of this division, and shoes were purchased of Wm. Hahn & Co., shoe dealers. In addition to this amount, the sum of \$150 was raised by the teachers. With these amounts, fuel, shoes, and shelter were furnished many families. Vouchers covering the items bought and the amount expended are on file in this office.

CONCLUSION.

I can not close this report without acknowledging my profound appreciation of the able and kindly support given me by all connected with this department. To the teachers who have so patiently and earnestly labored to advance their pupils, to you and the local committee for counsel and support, I desire to express my sincere thanks.

Very respectfully,

E. W. BROWN,
Supervising Principal.

Mr. G. F. T. COOK,
Superintendent of Schools.

PRIMARY WORK.

WASHINGTON, D. C., *June 30, 1899.*

DEAR SIR: In reviewing the work of the year just ended we feel that we have cause to be gratified with certain features, while we disclaim all feeling of satisfaction. Indeed we are too thoroughly imbued with the conviction, that the worst teachers are generally those who are sufficient unto themselves, being satisfied with their knowledge, their methods, and small, unskilled performances, to even wish to possess such feeling.

The work of the primary schools more than that of any other sustained a severe shock from the time lost incidental to the weather conditions and the epidemics. The teachers in certain sections of the city struggled heroically against fearful odds; but be it said to their credit, the work, as the accompanying records will attest, is an improvement upon last term, which had fewer breaks, the only deplorable feature being that the benefits were given to a smaller number of children.

TEACHERS' QUALIFICATIONS.

Though many of our aims and aspirations have fallen far short of the mark, yet we perceive most hopeful signs which forecast a bright and eventful future. The teachers are becoming possessed with the idea that they have something to learn in the science of teaching—that there is a science connected with the art which they are practicing; that a knowledge of this science is indispensably necessary to the proper practice of their art; that the child's mind is not a passive receptacle into which they must force knowledge, but is an active agent which it is the teachers' duty to stimulate and direct to action, developing it to the extent of its capabilities.

The conviction which fastened its tentacles deeply into the minds of the young and unskilled teacher, that education can be effected by the

act of "prancing before the school," has been uprooted, and though there remains a suggestion here and there, yet the signs are hopeful for a complete dislodgement. They are keenly alive to these facts:

(1) That the task of training the young is one fraught with responsibilities and requiring the most painstaking and conscientious work.

(2) That to successfully perform this task, special preparation and study are necessary, not only of the branches of knowledge selected to form the basis of the instruction, but also of the mind to be operated upon and the methods and appliances to be employed to render the work effectual.

(3) That education has for its aim the training of special faculties and functions with the purpose of improving their conditions.

(4) That if they undertake the training of these faculties and functions, it is indispensable that they understand them.

(5) That since trainers of horses, dogs, birds, etc., must make a profound study of the subject they elect to train, it is vastly more important that they, the teachers, make a deeper study of the children they have elected to train.

With these facts ever before her, the faithful teacher is laboring to fully acquaint herself with the principles underlying her art, to master the branches which she is required to teach, to adopt the best methods, to employ the proper appliances; she is laboring to make herself thoroughly conversant with the outlines of mental science, investigating intelligently the office of each faculty of the mind, observing the order of their development, the forces operating to aid this development so that the training given by her may produce a well-balanced mind.

Dr. Youman says: "A knowledge of the being to be trained, as it is the basis of intelligent culture, must be the first necessity of the teacher."

TEACHER'S FUNCTION.

Being thus equipped, the teacher is master of the situation. In the beginning of the work she must recognize these little bundles of activity as "nature's pupils," fresh from her school, possessing a fund of information upon which the teacher must work; she must grasp well this fact, that from their advent into the world they have been under nature's instruction and she has wrought marvelously well. Our experience is this: teachers generally overlook half the latent powers in the child—they have not sufficient faith in the child's ability, because of which they fail to call them forth.

With a mastery of the elementary principles of the profession, a watchful outlook for the hidden powers, and a firm faith in her ability, it is an easy task to gauge the child's mental condition and to so grade him as to supplant nature's work. A failure in this step is of grave moment to the child and a never-ceasing trial to the teacher who labors with might and main to do for the child what nature has already done.

Understanding the child and the conditions, the teacher must possess her soul with this one idea: it is hers to educate and instruct the child, but not to stunt his intellectual being and cram his mind.

The teacher's work is to bring nature to the child and guide and stimulate him to the acquisition of the proper knowledge by nature's methods. It is hers to lead him to do—do—do, knowing that only by repeatedly exercising his faculties is strength developed.

"The primary principle of education is the determination of the pupil to self-activity—the doing nothing for him which he is able to do for himself." The teacher guides and supervises the actions, makes regular the irregularities, polishes up the rough places, organizes the disorganized, in dealing with these embodiments of animal, intellectual, and moral activities with which they must from day to day come in contact.

The child's animal nature affected by external influences and endowed with vital energies may be used or abused to his weal or woe. His intellectual nature, capable of unlimited development, may be strengthened by the acquisition of knowledge or weakened through neglect; his moral nature, capable of becoming grand and noble, a source of happiness to himself and others, may by corruption become groveling and ignoble, a source of misery to himself and the world in which he moves. The teacher's work, then, is to so influence these forces as to secure beneficent ends; in other words, convert these little ones into beauteous beings; Rousseau says, "Make your pupils robust and healthy in order to make them reasonable and wise." Whatever margin may be granted the instructors of children who have reached that stage in which they can help themselves, it is of vital importance that those in charge of the primary schools shall be skilled workmen. The beginning of a child's school career decides his future life—whether he shall invite or reject instruction; whether his ideas be clear or cloudy; whether he shall be a giant in intellect or a mere machine; whether he shall leave school at last disgusted with the whole scheme, a lean, hungry weakling, or ambitious and robust, an independent creative being. A wise insight into human nature demands that the most skilled teachers be put in charge of the little folks, and the less able ones be given charge of the stronger minds. Nothing gives me more concern in my work than this practice of removing the teacher from the little ones because she shows ability, and consigning her charges to the inexperienced and unskilled teacher. I most earnestly appeal in behalf of the little folks who are started in the wrong direction in life that this practice be reversed.

LANGUAGE.

We express our thoughts and feelings by language. Language is the power possessed by the activities of the mind to associate ideas and thoughts with their symbols. The little one on entering school knows many words and is able to associate them with the ideas, but he is unacquainted with the corresponding forms. To acquaint him with the

forms, the idea is drawn from him and the form then presented, great care being exercised to make the proper impression. That this may most effectually be accomplished the child's self-activity is called in play. He is led to handle the object and express himself on what he observes, the teacher guiding the action. His errors are never emphasized; when improvement is necessary the teacher asks that it be said in another way, or in a better way. In this way the child committing the error is encouraged to further effort and not discouraged in his feeble attempt. He learns to observe by observing, to talk by talking, and when sufficient strength is his he learns to write by writing.

By much judicious work in this line habits of correct observation are formed, and the little one soon learns to trust his senses, thereby gaining confidence in his powers.

Script is taught from the beginning. Much precious time is saved by this, for if print were first taken up the labor would have to be repeated to take up script, thus unlearning what was needless work to have learned. The transition from script to the print, when books are introduced, is attended with little or no trouble where the work has been properly conducted.

COMPOSITION.

This is but a continuation of the work already outlined, oral composition being pursued until they have acquired powers to write, when written composition is begun. This plan is followed because we believe written composition is impossible until the child has something to say and has learned how to say it.

The best results have been obtained by the use of topics or questions, the object discussed before the children. To permit copying is lazy work and retards attempts at originality far beyond its stage. Originality should be aimed at though the child give but one short sentence. Growth is discernible in this work.

READING.

To secure intelligent reading in natural tones is the problem which confronts us. We find the only truly helpful plan is to bring the child in touch with the subject in the proper way before requiring him to read from the book. A proper understanding of any subject begets intelligence. Silent reading has done much to improve the existing evils. The plan of having supplementary reading whenever possible does much to cultivate a true love for the study. Little folks enjoy stories and rhythm. Taking advantage of this fact choice collections of stories and poems bearing on the nature and science work are made. When the time is ripe they are given to the children with the hope that they will be early introduced to a few of our great writers and acquire a taste for their choicest and purest literature. This feature is an enjoyable one, delighting teachers and pupils alike. The gems of memory

selected not only supply the minds of the little ones with treasured thought, but do much toward forming habits of attention and strengthening the memory.

TALKS.

We can hardly appreciate how little the child knows concerning the most commonplace things. To bring to him much needed information, to cause him to go through the world with his eyes open, morning talks are given on topics interesting and instructive to him. These talks not only make the child observant, but cause him to freely express his thoughts. By them a bond of sympathy is established between teacher and pupil, and the little one sooner finds his bearing.

MODEL WORK.

The model schools and teachers have done much toward unifying the work of the first grades.

Five model lessons have been conducted during the term. In our visits through the schools, we are forced to recognize the benefits received by the observers of these lessons. Many a teacher discouraged and doubtful concerning certain points which constitute her rule of actions gains confidence and strength by seeing the same operated by others; or, seeing methods and principles employed which have proved effectual, is encouraged to attempt the same in her school. Difficulties are minimized, impossibilities are made possibilities, and strengthened and helped the teacher returns to her work with renewed energies and determination.

If model work could be introduced in the second and third grades, much lasting good would result to the schools.

MEETINGS, ETC.

With my faithful assistant's help we have conducted 60 meetings of teachers during the term, at which work planned for each month was given. Because of afternoon and forenoon schools of the same grade, it is necessary to hold double the number of meetings otherwise requisite.

We have made 1,502 visits for the purpose of supervising the work and given 318 lessons to clear the way for teachers needing it.

The teachers of the model schools made 398 visits to encourage and help in needy cases.

MARRIAGES.

We are wont to expect careless and indifferent work from those who decide to leave the profession, but the six teachers who took the step this year left behind them a record for which they can justly be proud. In every case the work was a marked improvement on the last year's work. They deserve the highest commendation. Of the corps of

teachers with whom it is my delightful pleasure to work I can not say too much in its praise. Their patient, conscientious work is deserving of greater praise than it is mine to give. The reward will come in His appointed time.

I wish, in conclusion, to thank the trustees for their kind consideration whenever called upon, and you for your valuable counsel, which was given so generously and heartily.

I am, very respectfully,

E. F. G. MERRITT,
Director of Primary Work.

Mr. G. F. T. COOK,
Superintendent of Public Schools.

HIGH SCHOOL.

WASHINGTON, D. C., *June 30, 1899.*

DEAR SIR: In submitting the annual report of the work of the high school I find myself at a great disadvantage, growing out of the fact that my tenure of office as principal has been too brief for me to give a full and just estimate of all that has been done by either teachers or pupils during the academic year 1898-99. To make intelligent and profitable recommendations for the future guidance of this very important part of our educational system, which has been developed so rapidly and so admirably during the last decade, demands an accurate and full knowledge of its work during that period in all its progressive stages. A fair and proper discussion of the accomplishments of the pupils, of the methods of instruction employed by the teachers, and the general needs of the high school can be made only by one who has observed closely during the year every detail of its work in its various departments. Yet I can not plead entire unfamiliarity with the system under which the school as a whole has been working, nor its needs as they have been developed and discussed from time to time in the teachers' meetings and in my daily talks with the individual teachers. In my position as an assistant teacher, from which I was promoted to that of principal; I also had an opportunity to make note of much that was being done in the many parts of the school other than the special department that came under my immediate supervision.

During the past year the work of the high school has not been unlike that of previous years. I believe that there has been a constant and unremitting effort on the part of the teachers generally to perform their duties in such a manner that their work would not only be in harmony with the excellent educational scheme of our school system, but would also meet the needs of the pupils under their care and instruction—the first great principle on which all useful education is based.

ATTENDANCE.

The whole number of pupils on the rolls during the year was 678, of whom 199 were boys and 479 were girls. The average number of pupils enrolled was 586, and the average number in daily attendance was 559. The percentage of attendance, based on the average enrollment, was 95.3. In the entire enrollment there were 12 pupils less than in the previous year. This loss in the whole number of pupils enrolled, instead of the usual and expected gain, must be regarded as simply an incident without any particular significance rather than the indication of any peculiar conditions. It would be absurd and illogical to use this single instance as a premise and attempt to draw from it any general conclusions touching the hold that secondary education has upon the popular mind. Indeed, this effect might find its cause among a multiplicity of reasons, each one of which would be indicative of a condition sporadic and ephemeral, with no tendency whatever toward a further falling off in the high school enrollment. The teacher himself may be a powerful factor in the matter of the attendance of the pupils committed to his care. A part of the time assigned to weekly rhetorical exercises might be spent very profitably by him, not only in giving instructions in morals and manners, but also in exerting his best endeavors to impress on the minds of the young that a pupil can have no higher or more imperative duty in connection with his work than to be regular and punctual in his attendance at all school exercises. The earnest teacher should feel a personal responsibility for the attendance record which he submits to the principal of the school at stated periods. It should not be necessary to say here what is accepted by common consent everywhere, namely, that there can be no more serious violation of the rules of a well-regulated school than failure on the part of a teacher to be prompt and punctual in his own attendance. The teacher who is frequently absent and occasionally tardy by his example unconsciously inculcates in the pupils under his charge habits that may affect them disastrously in those walks of life which demand exact compliance with all rules of promptness and regularity touching the business in hand.

DISCIPLINE.

The moral welfare of the pupils should be the chief aim of all teaching. In any large community a small portion, at least, of the boys and girls come from localities whose influences are not wholly favorable to the nobler development of character. It requires a teacher, therefore, with something more than mere intellectual fitness to meet successfully the conditions of a great common school in a large city. It requires a teacher with a heart and a soul, with unselfish interest and sympathy, to direct properly the kind of training and instruction that will awaken the better and higher life of the pupil, if it be dormant, and will develop such interest in him as will perforce lead the mind into right ways of thinking.

Our system of discipline works toward this ideal. It is hoped that the day is not far distant when the "discipline hall"—a place for

violators of the rules and regulations of the school—will be a thing of the past. We shall reach this ideal condition when the teachers will have been able to inspire the boys and girls to conduct themselves properly, not because of fear of punishment, but because it is right to do so. This is the kind of moral uplift that should be the supreme object of every school.

- The plan was tried during the last part of the year of putting all the boys of the school during recess under the charge of the commissioned officers of the battalion. The officers were instructed to see that there were no violations by the boys of the rules of the school during the period for recreation and play. The scheme worked well. The boys were respectful and obedient to the officers to a surprising degree, especially when it is taken into consideration that many of the boys are not members of the battalion and have had no training whatever in the duties of a soldier and can be expected to know little of that absolute obedience which an officer can always demand of a private.

BUILDINGS, ACCOMMODATIONS, AND EQUIPMENTS.

The high school building proper needs all the attention by way of enlargement recommended by my predecessor in his report one year ago. The departments of drawing, biology, and physics have not sufficient space to meet the requirements of the large number of pupils in their courses. At least three days in the week there are three different classes in the physical laboratory at the same time, making it impossible for the instructors to do their most effective work and for the pupils to get the full benefit of the training that should come from the study of physics.

There can be no proper work in biology unless there is a laboratory adapted to the best methods of instruction. The room used for this subject at present is small and divided by a partition, which renders favorable disposition of materials or seating of pupils an impossibility. One faucet over the sink in an adjacent cloakroom supplies the water from a tank in the building. The only available cases are in the adjacent class room, which is occupied by pupils in recitation or study at least twenty hours a week. If no better arrangement can be made for this laboratory, a feature that receives special consideration in the high schools of all large cities, it would be well to set apart the adjacent class room as a lecture room and museum in addition to the present room and thus relieve to some extent the cramped condition of the present apartment devoted to this subject. There is no way of doing this, however, unless more space is provided to meet the exigencies that would arise from depriving a class of its regular habitat.

The efficiency of the present room may be increased by adding glass doors to the cases now standing, building a new case similar to the two already in place, and putting twenty small drawers in the lower portion of two cases and five long drawers in the one to be erected.

The roof of the main building is not in good condition. This fact was made evident when the thaw came after the great blizzards of last

winter. Here and there were leakages that wet the plastering and caused it to become so loose in one place that it fell in large quantities later. Fortunately this happened at night. It is providential, however, that no one was injured, because several hundred people had just entered the building to attend a school entertainment.

The business school held its sessions during the year in the Douglass school building, which is only a short distance from the main building. It is a new structure, and the condition of the part occupied by this branch of the high school seems to be good.

In the way of equipment the Business High School received an addition of six new typewriters, which will greatly help the work in the course of typewriting. The old machines should be thoroughly overhauled from time to time, repaired, and kept in good condition. This will not only add to their effectiveness but will preserve them much longer than if neglected.

INSTRUCTION.

No standard for a school system can be too high. The people have a right to demand that their schools have the best methods of education, and that the best fitted men and women be selected to train the youth of their community. Good teachers aiming at a high standard produce in the main a successful result although it may not be that ideal result demanded by those people who are fond of giving a loose rein to the spirit of criticism against schools and teachers. Schools are human institutions; teachers are human beings, possessed of human virtues, and neither can attain to divine perfection. No fair minded person at all familiar with the schools, who keeps in touch with educational methods, can visit the classes of our high schools from time to time without being impressed with the good solid work that is being done both by teachers and pupils. Then there is so much unostentatious, quiet, formative work done by some of the more earnest teachers after school hours, helping those less fortunate pupils who for one reason or the other do not keep up with their classes well, that it is hard for the public to properly estimate the real value of the labors of such teachers.

The prime object of our high school course is to teach the boys and girls how to use books and to impress them with the idea that education is not simply the parrot-like learning of facts and theories and the mere gaining of information. One of the chief functions of a secondary school is to prepare young men and young women to become teachers in the primary schools. That our work along this line has been well done is best evidenced by the splendid success of our graduates who are connected with the school system of the District of Columbia.

Our course of study is such that each instructor has his special subject. The ambition of the different teachers to awaken in their pupils an intellectual interest in the particular subject each happens to be teaching creates a competition helpful to the teachers themselves and of great benefit to the pupils. For to sustain this interest when once

aroused the teacher must ever be a student; must be alive to every new method of presenting his subject; must struggle against the deadening influences of routine in teaching, and must at all times endeavor to improve and to add to his own intellectual equipment.

The spirit with which the pupils do their work is commendable, and reflects credit on the teaching ability of the corps of instructors. Although we have not reached the point where we can safely abandon the marking system as a whip and spur, yet it is gratifying to note that many of the high school pupils do faithful work from a higher motive than that of making a certain percentage.

COURSE OF STUDY.

YEAR.	Academic.	Scientific.	Technical. ^a	Business. ^a
FIRST.	English. History. Algebra. Latin.	English. History. Algebra. German or French.	English. French or German. Algebra. Manual Training. Drawing.	English. Business Arithmetic. Bookkeeping. Penmanship. Shorthand. <i>Typewriting or Mechanical Drawing.</i>
SECOND.	{English. English History. Greek. Geometry. Latin. Physics or Chemistry.	{English. English History. French. Geometry. German or French. Physics or Chemistry.	English. French or German. Physics. Geometry. Manual Training. Drawing.	English. Bookkeeping and Business Practice. Commercial Law and Commercial Geog. Shorthand. Typewriting. <i>Advanced Mechanical Drawing.</i>
THIRD.	English. Latin. French. German. Greek. <i>Biology or Chemistry or Advanced Physics.</i> <i>Political Economy.</i> <i>Trigonometry and Surveying or History.</i>	English. German or French. <i>Biology or Chemistry or Advanced Physics.</i> French. <i>Political Economy.</i> <i>Trigonometry and Surveying or History.</i>	English. French or German. <i>Physics or Chemistry.</i> Manual Training. Drawing. <i>Trigonometry and Surveying.</i>	Each year of this course is complete in itself.
FOURTH.	English. Latin. <i>Advanced Biology or Chemistry and Mineralogy or Physics.</i> Greek. History. <i>Analytical Geometry and College Algebra.</i> French. German.	English. German or French. <i>Advanced Biology or Chemistry and Mineralogy or Physics.</i> History. <i>Analytical Geometry and College Algebra.</i> French.	English. French or German. <i>Physics or Chemistry.</i> <i>Analytical Geometry and College Algebra.</i> Manual Training. Drawing.	Students of this second year may substitute an equivalent amount of work in English and Shorthand for Bookkeeping, or in English and Bookkeeping for Shorthand.

^a This course does not prepare for the Normal School.

Elective studies are printed in *italics*; all others are prescribed.

A general exercise in music is optional, except for Normal School candidates, for whom it is prescribed.

Drawing is prescribed for all pupils of the first and second years; also for Normal School candidates throughout the course.

Candidates for diplomas must pursue all the prescribed studies and at least four studies in every year. Students who, from any cause, fail to meet this requirement, are enrolled as "unclassified," and can not graduate until the prescribed work is satisfactorily made up.

Pupils who desire to prepare for college can make special arrangement of their courses upon written application to the principal. This must be done by pupils of the second year who elect Greek, or French of the scientific course.

BIOLOGY.

Biology is prescribed for all Normal school candidates in both the third and fourth year classes of the academic as well as scientific course. It was elected, also, by several pupils who wished to submit it at their college entrance examinations or to secure from it some general culture.

Boyer's Manual of Elementary Biology was the guide for the first part of the course, supplemented by the lectures upon the orders containing the specimens examined, and visits to the United States National Museum for research. Marshall and Hunt's Zoology was used in some cases of second-year work where pupils desired to follow a special line of investigation. Weekly lectures upon related scientific topics were given for the first time to the fourth-year class. The purpose of these talks was to lead the pupils to see and to appreciate the immense impulse given to human progress by the achievements of science, and the great fields for investigation and usefulness which await the efforts of intelligent, careful, painstaking, persistent students.

The biographies of leading men of science were studied by the classes in order to direct the attention to the difficulties to be overcome in the pursuit of truth as revealed by nature, the breadth of scholarship essential to it, and the eternal rewards consequent upon success.

During the year frequent excursions were made for the purpose of studying local plants and animals in their habitat, attention being directed to cases of parasitism, variation, distribution, survival, and natural dependence in apparent isolation.

The prime object of the work in biology has been an endeavor to inculcate in the pupil such a love for nature, based upon an intelligent appreciation of her parts, as shall compel the future teachers of the graded schools to use her wonderful resources in their daily instruction.

Much gratitude is due Dr. D. S. Lamb, of the medical department, Howard University, who secured from Col. Dallas Bache, of the Army Medical Museum, Surgeon-General's Office, seventy-five mounted specimens of the different orders of vertebrates. This collection forms a splendid nucleus for a much-needed and growing museum. It was increased by the addition of a number of insects, mollusks, ruminant skulls, and alcoholic specimens contributed by the pupils.

Dr. Lucas, vertebrate curator, and other officials of the United States Medical Museum have been especially kind to the pupils and instructor.

CHEMISTRY.

The work in chemistry during the year was in the main as follows:

1. Introductory chemistry, comprising a study of the metals and the nonmetals by laboratory work, recitations, frequent quizzes, and oral and written reviews. During the course several simple qualitative tests were made.

2. Qualitative analysis and organic chemistry.
3. Qualitative analysis and mineralogy, and investigation of the composition of foods and the adulterations used, and the analysis of various samples of drinking water.

The facilities for teaching chemistry in the high school are good, and it is gratifying to note that the number of pupils electing this subject is increasing. No subject can be pursued in a school to a greater advantage than chemistry. It has an undisputable claim to be ranked among its leading courses. One who is at all familiar with the subject can readily appreciate its value as an educational instrument. In a course of study such as that of the high school, extending over a period of four years, every pupil should take this subject at least one year. No graduate of a secondary school of such high grade should be wholly ignorant of the elements of chemistry.

BOTANY.

The work of the year comprised the study of plant life as outlined in Bergen's *Elementary Botany* and MacDougal's *Plant Physiology*. In connection with these studies of plant life the economic value of groups was considered as well as bacteria and mushrooms. Field studies also formed a part of the work during the spring term.

In giving instruction in botany every effort was made to stimulate and strengthen the observational powers of all pupils, to lead them to form habits of accuracy and to draw independent conclusions.

ENGLISH.

The English language has been properly called the very core of secondary education in America. There can be no reasonably complete high-school course that does not require its constant study. English is prescribed for all classes in the high school. Every facility is given to make instruction in this subject systematic, thorough, and effective. In order that every phase of the best methods of teaching the mother tongue may be presented, the teacher is allowed the greatest freedom in planning his course, and he is given every opportunity to so regulate his work that it may be in harmony with the real needs of his pupils. The way is open to him to make English the equal of any other study in "disciplinary or developing power." Everything is done to help him to obtain satisfactory results. Throughout the school there is a general desire among the teachers to have the written and spoken English of the pupils better. The teachers in the departments of mathematics and the sciences appear as much interested in the work as those who devote themselves exclusively to the English courses.

When the German Emperor, addressing the school conference held at Berlin in 1890 touching the subject of teaching German, said, "We wish to educate young Germans, not young Greeks and Romans," he

spoke for the rest of the world as well as for his own Empire. His contention was not that Greek and Latin should lose their high places in the world's educational system, but that German should be given equal rank with them. Thus in our own high-school course there has been no attempt to degrade other languages, but simply to give to the study of English the elevated status which it should occupy in an American school. The well-known "Committee of Ten" expressed the following opinion on this very subject:

The best results in teaching English in high schools can not be secured without the aid given by the study of some other language. Latin and German, by reason of their fuller inflectional system, are especially suited to this end

Our course of study is so outlined that the study of English throughout has just the kind of help here suggested, for all of the academic and scientific students must study one foreign language as well as their own.

We employ in the high school the traditional means of teaching English—by reading, speaking, and writing. The endeavor is to teach pupils to read and to speak with an intelligent appreciation of the subject-matter and so as to interest their hearers, and to write with correctness instead of striving after literary skill.

The first-year class began work with a study of sentences grammatically and rhetorically considered, based on Lockwood's *Lessons in English*. During the year the class read selections from Irving's *Sketch Book*, Tennyson's *Idyls of the King*, and Dickens's *Tale of Two Cities*, as a basis for written work in narration and description. The class also made a critical study of Tennyson's *Lancelot and Elaine* and devoted careful attention to letter writing. The pupils showed much improvement in the form and neatness of their written exercises and in their manner of expression.

The second-year class read Shakespeare's *Merchant of Venice*. Written exercises based on the text were required weekly, and much of it was done in class. This class took English as a study only part of the year. The rest of the time was devoted to history.

The third-year class studied Milton's *Minor Poems* and books 1 and 2 of *Paradise Lost*, with a glance at the life of the author and the history of his times. Shakespeare's *Hamlet* and *Macbeth* were also studied and read in class. The pupils read other plays outside of the class and were required to report on them.

Careful attention was given to the study of words, figures, and allusions in order to enable the pupil to grasp the thought and to enjoy the beauty of the language. The correction and revision of written exercises based on the plays read in class gave large opportunity for a review of the principles of grammar and rhetoric.

In connection with the life of Shakespeare the outlines of the history of the literature of the period in which he lived were studied. The chief aim of the course was to enable the pupil to think clearly and to express his thoughts in good, concise English, as well as to cultivate a love for the best literature.

In the fourth-year class much more attention was given to written and oral expression than ever before. In order to make written work uniform throughout the school, the Rochester Theme Book was used in all classes with gratifying success.

In the work of the fourth-year class special attention was given to obtaining a wider vocabulary, and there was frequent discussion of the English idiom, variety in the use of sentences, and good paragraph structure. The student in this course is constantly stimulated to originality in thought and language, many obvious errors being at first overlooked. Paragraph and essay writing in narrative and descriptive form was made a special feature of the work.

In literature the following works were read and critically studied, viz: Tennyson's *Princess*, Selections from Ruskin's *Modern Painters*, and George Eliot's *Silas Marner*.

At the close of the school year the class presented, in costume, *The Princess*, which had been dramatized by the director of the English department.

The work of the year was in the main satisfactory.

FRENCH.

In the scientific course the foreign language studied is either French or German. Boys and girls who are left free to elect a study for themselves generally take the one which their predecessors have made popular by constant selection from year to year. German has been the fortunate language in this respect. The French classes are small in comparison with those in German—a condition of things that obtains in other schools as well as our own. It can not be that the marked difference in numbers between the classes in French and those in German is due to any reasonable or inherent prejudice against the beautiful, ornate, and useful language of the French people. It is due rather to the influence, as has been said, of the pupils who have gone before. The German department would lose nothing in strength if more pupils who enter the high school would select French.

The first-year class in French completed the *Livre de Lecture et de Conversation* and read *Le Chien du Capitaine* with the second-year class. In addition to this the second-year class read a part of *Fleur de France*.

GERMAN.

The German work of the first year had for its highest aim quality, not quantity. The object was to obtain a skillful handling of declensions and conjugations by means of fixed models for each, and persistent drill in referring to the model, in quickly recognizing forms, and in developing the power of full and lucid explanation. Effort was made to acquire a good working vocabulary and the pupils were taught the use of the German script. Special attention was given to pronunciation and proper accent. The language of the class room was not wholly

restricted to German, but wherever it was possible to use that language without clouding necessary explanations it was employed.

The second-year work was the natural expansion of what was accomplished in the first year. In translation close attention was given to careful idiomatic English and a rigid analysis of the German text. During a part of the year one hour each week was devoted to German prose composition, the lessons being carefully prepared and written in notebooks at home, discussed and corrected in the class room, and again rewritten at home or in school.

In both the prose work and the translation of the simple German stories emphasis has been laid upon the elements of syntax—the use of modes, tenses and cases, sentence structure, prepositions, conjunctions, and other parts of speech. Considerable attention was paid to sight reading. The year's work has been, on the whole, satisfactory—pupils gaining in power and appreciation with every quarter's work. Many of them showed marked ability and might have accomplished twice the amount of work done if they had been unhampered by others who could not progress so rapidly.

The third-year German class read Heine's *Harzreise*. The difficulties of this book and the analytical treatment which they demanded proved of incalculable benefit to the pupils. In the fourth quarter the class began Freytag's "*Die Journalisten*," and read one act. German composition was written and carefully examined in class, and corrected form entered in notebook.

The fourth-year class read Lessing's *Minna von Barnhelm* and part of Goethe's *Hermann and Dorothea*. The first-named work was studied as one would study a play of Shakespeare. As soon as the difficulties of the meter in Goethe's work were overcome the class performed the rest of its labor with considerable ease; the severe drill on the *Minna von Barnhelm* proved an admirable preparation for this task.

It is hoped to make the full course in German one of natural graded development for the pupils, so that from the drudgery work of the first year the subject will be pursued with constant increasing charm through the whole period of four years.

Appended will be found the course in German for the first and second years.

("*Es bildet sich ein Charakter im Strom der Welt.*")

First and second quarters.

1. Declension: Select one model word for each; drill on it.
2. Conjugation:
 - (1) Personal endings—primary and secondary.
 - (2) Sein, haben—simple tenses of the indicative.
 - (3) Strafen (a weak verb) in indicative, active, simple tenses.
3. Definite article and similar words—complete.
Indefinite article and similar words—complete.
4. Select simple passage of prose:
 - (a) To be memorized by each pupil.
 - (b) Illustrating 1, 2, 3, above.
 - (c) Note kinds of sentences—simple, complex, compound.

Third and fourth quarters.

1. Declension: Nouns with article and adjectives.
2. Conjugate:
 - Weak.
 - Strong.
 - (Principal parts and meaning.)
 Synopsis: Active and passive indicative, with every possible English equivalent.
3. Prepositions:
 - (1) Learn and recite in group those that govern the accusative.
 - (2) Those that govern the dative.
 - (3) Learn the meaning of others.
4. Conjunctions: Pronouns, word order, adjectives.
 - Predicate.
 - Attributive.
 - Comparison of adverbs.
5. Syntax:
 - (1) Essentials of German Accidence; or
 - (2) Grammatical Appendix—Buchheim's Prose, or Grammatical Notes—Bernhardt's Prose.
6. Composition based on selection from "Erste Stufe" of the Lesebuch.
7. Modal auxiliaries.
8. Explanation:
 - (1) In complete German sentences; or,
 - (2) In English sentences entirely.

SECOND YEAR.

First quarter.

Rapid review of first-year work.

Der zerbrochene Krug:

- (I) Mariette.
- (II) Wie das Unglück kam.

Second quarter.

Der zerbrochene Krug—finish.

Third quarter.

Krambambuli—finish.

Fourth quarter.

Fritz auf Ferien—finish. (Did not find time to read this.)

- (1) Reading aloud: Pronunciation, expression, interpretation.
- (2) Composition: Based on the text, German script.
- (3) Grammar:
 - Conditions: (1) Simple, (2) future, (3) contrary to fact.
 - Indirect discourse—possible forms.
 - Circumstantial participle—shades of meaning.
 - Object infinitive (complementary).
 - Substantive clauses—as appositives.
 - Purpose, result, wishes.
 - Modal auxiliaries—how used.
 - Adverbial particles—their force.
- (4) Explanations:
 - (1) In complete German sentences; or,
 - (2) In English sentences entirely.

GREEK.

The course in Greek is for three years, beginning in the second year; only pupils who intend to go to college are supposed to take Greek. The classes were small; in the first year there were five pupils, in the second year eight, and in the third year only one. The first-year class did good work, both in quality and quantity. White's First Greek Book was the only book used, and proved to be a highly practical work. The declension and conjugation work—power to make forms, by constant reference to paradigm forms—engaged the attention of the class throughout the year. A great deal of blackboard work was done, so that rapidity in execution, accuracy, system, and finish in form might be made possible for the pupil and harmonize the relation of the tongue, eye, and ear for the best work.

The second and third year classes shared the same hour, to the disadvantage of both; especially to the disadvantage of the third-year pupil. This arrangement brought increased work to the teacher, without a compensating good result to the pupils.

The second-year class was a group of pupils full of energy, and though the arrangement above mentioned retarded the work somewhat, yet the result was generally satisfactory. They read Book 1 of the *Anabasis*; had composition and grammar based on it, and made commendable progress in acquiring accurate translating power and in satisfactorily feeling the "why?" behind it all, and expressing it so as to leave no doubt as to their grasp of the subject. Application of principles was insisted on till constant use removed doubts from pupils' minds, and the proper doing of work became habit and left few incorrect impressions to be blotted from the brain.

Four hours a week were given to the Greek classes.

HISTORY.

The text-books used in the first-year class in its work in history were Meyer's *Ancient Nations and Greece*, and Allen's *Roman History*. The first quarter was largely devoted to instructing the pupil as to the best use of a text book. As the year advanced each pupil was given individual work, the results of which were freely discussed by the class, and the best thoughts arranged in outline and dwelt upon.

Pictures, photographs of buildings, statues, monuments, and engravings relating to the work in history were collected by the pupils, neatly mounted, clearly labeled and arranged in portfolio.

This work created and stimulated in the pupil a commendable and gratifying enthusiasm for research. Maps were freely used, the pupils in many cases making their own and indicating by colored pencils or water colors the change of territory by conquest. Aside from the fact that stress was laid upon the necessity of acquiring the ability to tell in their own words the subject-matter of the Greek and Roman history covered during the year, the pupils were invited to discuss questions of

the day when they were called to mind by the history studied. This method was conducive to a greater interest in the work and gave the pupils some training in stating their opinions clearly and logically.

The year's work, taking it as a whole, has been a success. The majority of the pupils appear to have a broader outlook and to be well prepared for the future study of history.

In pursuing the work in second and third year history the aim has been to develop thought and to lead to the formation of correct opinions by reasoning from cause to effect. As a basis for this, accurate and sufficient information has been insisted upon, but nonessentials, never.

The endeavor has been to impress upon the pupil that the study of history is by no means an exercise in memorizing a quantity of unrelated facts, much less a verbatim repetition of the text used, but is rather a study of the world's life—the thoughts, motives, conduct, and aspirations of men and society of the past, which affect intimately and vitally the life of man and society of the present.

The work has been largely topical, but comprehensive, the student studying the particular topic as broadly and as intensively as possible and giving the result of his study in his own language. Accuracy of information and correct expression has been insisted upon.

The second-year classes have taken a larger view of English history this year than formerly, owing to the fortunate arrangement of the schedule of studies by which a part of the second-year class took history for the first half of the year and the other part the second half, but always with the same teacher.

In both the second and third year classes the students have worked earnestly and enthusiastically, with the most gratifying results.

The following is an outline of the work done by the classes:

SECOND YEAR.

The geography of England and brief glance at primitive inhabitants. Roman Conquest and domination of Britain, and effects. A brief study of the Teutonic-speaking people and of the state of Europe at the end of the fourth century. A study of the Saxons in their home in the German forests; their life, manners, political and social forms; their invasion and conquest of Britain and the planting of Teutonic institutions in England; the establishment of the English Kingdom and the influence of Christianity upon Saxon customs and social conditions.

The Norman Conquest and the changes it produced.

The origin, growth, and influence of feudalism. The growth of the English nation under the Plantagenets. The Great Charter and other political events and their effect upon later constitutional developments both in England and America. The Crusades; the relation of church and state.

Social conditions as affected by the Crusades, the wars with France, and political changes.

The destruction of feudalism through the Wars of the Roses and the consequent reorganization of society.

The origin of the Tudors, the New Learning, the Reformation, England of Elizabeth, Puritan England.

The rule of the Stuarts, the Commonwealth, and the Restoration.

THIRD YEAR.

History of France.

The principal features to be noted:

The decline of the Roman Empire.

The Germanic invasions.

The growth and dismemberment of the Arabian Empire.

The attempted new organization of a new empire by Charlemagne.

The rise and prevalence of feudalism.

The successive crusades and the constant influence of the church in matters political and social throughout Europe, and especially the relations of France and the church.

The leadership of France in the Middle Ages.

The rivalry between France and the House of Austria.

The religious wars and their consequence in France.

The ascendancy of France during the seventeenth century.

The growth of liberal ideas in France.

Causes, events, and results of the French Revolution.

Constitutional France.

The Franco-German war.

Recent changes in France.

AMERICAN HISTORY AND POLITICAL ECONOMY.

This course was elected by some of the best minds in the senior class, and the high character of the work done and the deep interest taken in the subject were an unvarying pleasure and highly gratifying to the instructor. In the first half year civil government as outlined in Fiske and Johnson's *American Politics* was taken, with essays on "American statesmen" and the "Development of American social and political ideas" by different members of the class, requiring wide reading and considerable original research.

The second half year was given to economics and the study of our special industrial forces. The work is directly practical and no doubt will continue to influence and direct the course of thought and action of pupils who have made it a study.

LATIN.

The first-year class attempted to complete Collar's First Latin Book, giving the greater part of the year to the mastery of forms. The frequent interruptions in the work caused by the unusually severe weather of the winter interfered with the plans of the instructor in this course.

The second-year class read portions of the first and third books and all of the second book of Cæsar's Gallic War. Once a week there were exercises in prose composition. All the verb and noun forms, the constructions of nouns, the gerund and gerundive, infinitives, purpose, result, and conditional clauses constituted the grammar work.

The third-year class read the first, second, third, and part of the fourth Oration of Cicero against Cataline and the oration in behalf of the poet Archias. There were twenty exercises in prose composition and a review of the grammar work of the second-year class.

In spite of the interruptions of the year's work from one cause or the other the fourth-year class covered quite the same ground of previous classes, which bespeaks for them a commendable amount of energy and first-rate stock of mental fiber. The class read the first five books of Virgil's *Æneid*, acquired a fair mastery of scanning and construction, and did some sight reading in the sixth book. In the quantity of sight reading alone did the class fall behind the classes of other years. This kind of work being occasional, had to give way for the regular routine in the pressure for time. Concert reading and memorizing were employed throughout the year to develop the power of scansion.

The first two weeks at least of the school year should be devoted to a general review of grammar work in all the classes in the school. A good drill at the beginning in forms and syntax will prepare the way for satisfactory work afterwards. Particularly is this to be insisted on in the second year. The work accomplished by the different first-year teachers has varied somewhat, of course, with the power and scope of the teachers as well as the caliber of the mass of material each had to work with. Uniformity can be claimed only on one point, i. e., that no pupil be promoted from the first year who has not a fair mastery of forms. To insure keeping step in subsequent work, therefore, the second-year teachers should at the start review or teach afresh the common subjunctives, indirect discourse, gerunds and gerundive, periphrastic conjugations, conditions, etc., taking care to give short easy sentences from the author to be read, which the pupils may mark and use as models of illustration.

MATHEMATICS.

ALGEBRA.

As to the scope of the work, the ground covered during the year has been little less than usual, through no fault, however, that can be attributed to the pupils. The class in algebra has been a victim of the same interruption that affected the work of the other departments of the high school.

The aim in this subject has been to make the work thorough and telling as to the development of principles and their application, while accuracy and neatness have been made a necessary part of the training.

Throughout the year original work has been required in problems and upon other points which has been found helpful in giving pupils a firmer grasp upon the subject.

GEOMETRY.

Four sections of the second-year class completed plane geometry. More original work has been done during the past year than in previous years and greater interest has been manifested by the pupils. The sections have been too large to do the most effective work. It is hoped

that in the future some arrangements may be made whereby the pupils may receive more individual attention than in the past.

The third-year class, numbering nine pupils, completed solid geometry, plane trigonometry, and conic sections. The character of the work done has been up to the usual standard of third-year classes in mathematics.

PHYSICS.

High school pupils begin the study of physics in the second year. In the first quarter much of the time is consumed in teaching the pupils how to study the subject, what to put in their notebooks, and how to arrange it in an orderly manner. The metric system is learned, too, for the first time. The first quarter, therefore, is a period of preparation for work rather than the acquirement by the pupils of many scientific principles. The class, too, was at some disadvantage because of two changes in instructors growing out of the resignation of the former director of the department of physics and the change in the principalship of the high school. The year's work, however, was in the main satisfactory, and the pupils are well prepared for a continuation of the subject.

In the second-year class not only a great amount of laboratory work by way of experimentation is done, but recitations and the working of problems to better fix the principles of the subject in the minds of the pupils are made an essential feature of the course. The student's knowledge of arithmetic, algebra, and geometry play an important part in this feature of his high school training. The frequent written reviews required in this course are of incalculable benefit to the pupils. They are the teacher's test of what the individual student is doing for himself without outside help.

The work of the third year was more successfully accomplished this year than in previous years, because the time devoted to the subject was increased to five hours per week.

Special attention was given to notebook work and to written reviews from time to time. Accuracy and neatness were especially enforced.

Special attention was also paid to electrical measurements, and a number of measuring instruments were constructed by the class.

Practical work in electrotyping, silver plating, and photography was given. Gold plating for the first time was introduced.

The regular course in electricity, sound, and light was pursued, and lectures in meteorology were given.

By the increase to five periods per week the fourth-year class in physics covered the usual amount of work, although the year was much shortened by severe weather and extra holidays. The increased time allotted the advanced pupils in the subject is very helpful, and greatly reduces the necessity for extra time and consequent individual visits to the laboratory to satisfactorily complete the work. To reduce the friction due to several classes in one room at one time two recitation

and lecture periods per week were arranged for and held in another class room. The change proved beneficial, though the conveniences of the laboratory are much missed and the best results are unobtainable.

As last year, great stress was laid upon neat, careful, and efficient notebook work; errors were pointed out and to a fair degree corrected by the pupil. This entails much work upon the teacher, but the improvement is well worth the sacrifice. The regular work in Thompson's Elements of Electricity and Magnetism was followed extensively, and enlarged upon from other works whenever possible. Of the practical work, photo-engraving in line and half tone, wire joint work, bell and gaslight circuit running, and the operation of an electric plant were studied quite carefully. As in former years, to stimulate unity of purpose and class organization, the classes photoengraved, electrotyped, and gold plated a class badge symbolical of the work, a copy of which each graduate wore at the closing exercises.

DRAWING.

The classes in drawing are large—too large, indeed, for the space allotted to the teaching of the subject. No work is more important for young men and young women preparing themselves to teach small children than this, and there should be at all times plenty of room in order to secure the best results. It is remarkable that such excellent work is done in the drawing department from year to year under what the director must feel is a decided disadvantage. Crowded as we are in every part of the school, there is no way to relieve the cramped condition of the drawing rooms unless the building itself is enlarged.

MUSIC.

The music classes have been drilled in the same general work as in previous years. The sections have their lessons in the large assembly hall. The instructor is earnest in his endeavors not only to maintain the high standard in music already won by the pupils of our public schools throughout all the grades, but to better it, if possible. It is rare pleasure to listen to the chorus singing of the pupils of the high school when assembled. Their excellence in this respect reflects credit on the training received, and must in some degree be a source of gratification to the music teachers.

PHYSICAL CULTURE.

The regular exercises in physical training were given throughout the year and were of great benefit to the girls for whom this work is prescribed. No woman can give her best possible efforts to the problems of life which she is trying to solve unless she is in good physical as well as good mental condition. "A sound mind in a sound body" means as much for a girl as it does for a boy. It is a matter of supreme importance that there should be in every school, as it is in our own, a system

of physical training for girls that will keep their bodies in such excellent physical condition that they will keep pace in every way with their brothers, who indulge in the more violent sports of baseball, football, and the military drill.

BUSINESS COURSE.

PENMANSHIP.

During the year just ended there was a noticeable improvement in the penmanship of the pupils of this course. Among those entering the school in September last there were more good penmen than in the class of any previous year. In the work of this year correct position of the body and manner of holding the pen were emphasized; but the result was not very satisfactory, as the pupils parted very reluctantly with their bad habits in this direction. Particular attention should be paid to these two things from the time the child is old enough to comprehend the difference between a bad position and a good one.

TYPEWRITING.

The work of this subject consisted principally of the practice of copying letters, tabulated work, and law papers accurately. The difficulties encountered in teaching this subject to pupils naturally inexact can be met only in one way—by making them copy the given work again and again until it is absolutely perfect. Each time this is done the habit of accuracy becomes stronger and stronger, and is of incalculable benefit to the pupil in all the work that he does.

ENGLISH.

During this year the work in this subject was less satisfactory than in any previous year. I attribute this result to the fact that the outlined work in English was better adapted than heretofore to the attainments and comprehension of the pupils. The first-year class read Irving's Sketch Book, Dickens's "Tale of Two Cities," and Tennyson's "Idyls of the King," which selections furnished a pleasing and instructive variety of subject and style. The reading was supplemented by written work in description, narration, and business forms; also sentence building and paragraph structure.

The second-year class read Shakespeare's "Merchant of Venice" and "Burke on Conciliation." The study of character afforded by the former selection and of argumentation by the latter was of exceeding benefit to the pupils, as evidences of increasing power of observation and of thought were exhibited in other work. The written work of the first year was continued in the second, and special effort was made to eradicate the germs of incorrect thought and expression so deeply implanted in the minds of the pupils. Special attention was paid to the paragraph and to note and letter writing.

SHORTHAND—FIRST YEAR.

The first and second quarters and a part of the third quarter were devoted to the principles as contained in the manual. Many supplementary exercises, suitable for illustrating and impressing the principles, were also given. The rest of the term was spent upon business letters, fables, and short extracts, which the pupils, after writing them many times in shorthand, were required to take from dictation.

BOOKKEEPING—SECOND YEAR.

The bookkeeping showed no material departure from that of previous terms. All the sets laid down in the text-book were written, as well as many others of more or less difficulty. Problems designed to illustrate principles and test the knowledge of the pupils were frequently solved.

The business practice, owing to the smallness of the class, could not be as diversified as was desired. Still, the pupils, through dealings with a bank and a commercial exchange, had considerable practice in the many details of actual business.

SHORTHAND—SECOND YEAR.

The aim of the second year shorthand work was to give the pupils a practical knowledge of the principles, ease and accuracy in dictation and readiness and confidence in transcribing what had been written. The exercises in the text-book, which, supplemented by similar ones from other sources, engaged the pupils, attention early in the term, served to impress the principles. The dictation work, simple and brief at first, proceeded with increasing difficulty as the term wore on, until toward its close it embraced matter of the most varied character. In the selection of this matter the important end of increasing the pupils' stock of general information was kept constantly in view. To gain familiarity with their own notes, and consequent readiness in transcribing them, the pupils were regularly required to read what they had just written, and also not infrequently matter less fresh in mind. Transcribing from the typewriter, though much desired, and according to the course of study even required, could not always be done by the pupils. The study hours, when work of this sort should have been done, had to be given up to other subjects. In order, therefore, to comply with the curriculum, and have transcriptions from the typewriter, it became necessary to take for that purpose a part of the shorthand recitation time.

HISTORY OF COMMERCE.

Instruction in this subject began with a series of talks on commerce, especially emphasizing its importance and connection with human progress. The class studied in historical order the origin, growth, and decline of the commerce of the chief nations of ancient, mediaeval and modern times, and the commercial development of the world,

together with its relation to civilization. By using freely the publications of the Bureau of Statistics of Foreign and Domestic Commerce, which were sent to the school regularly by the Department of State, the pupils were not only able to trace the commercial development of every country, but also to ascertain its present commercial standing and its relation with all other countries of the world. Along with this subject, its inseparable companion, commercial geography, was taught.

The special topic of the year, and one in which the pupils manifested intense interest, was the trade aspect of the late Spanish-American war—the commercial advantages and disadvantages resulting from our new territorial acquisitions.

COMMERCIAL LAW.

As contracts lie at the foundation of all business transactions, this course was begun by the study of the law of contracts. The subject was topically arranged for each pupil. With this outline before them, explanatory talks were given by the instructor, illustrating the principles of the law through simple business transactions, of which the pupils were made parties. After this came the study of contracts as laid down in Parson's Laws of Business, sales, stoppage in transitu, payment and tender, partnership and negotiable paper. On account of the general importance considerable time was devoted to contracts and negotiable paper.

ARITHMETIC.

The arithmetic work of the first year consisted mainly of oral analysis. In this subject the aim was to make the pupils quick and accurate thinkers. The branches taken up were percentage, profit and loss, trade discount, storage, commission, custom-house business, taxes, insurance, and interest.

The second year arithmetic began with a review of the first-year work and ended with the completion of the following subjects: True discount, bank discount, partial payments, equation of accounts, ratio and proportion, partnership, and stocks and bonds.

Rapidity were the ends sought, after it was clear that the principles were fully understood. In order that the pupils might acquire ease and facility in the use of figures drills in rapid addition and calculation were given.

Our bookkeeping department needs special attention, as it is not properly equipped for the required work; and the teacher in charge is unable to obtain satisfactory results with the meager equipments at his disposal.

LIBRARY.

In the annual report of the board of trustees of the public schools for the District of Columbia for the year 1897-98 the principal of the high school of the ninth, tenth, and eleventh divisions says in part:

“‘He is wise who knows who has written and where to find it,’ and, for the immature student, how to find information is important.”

Individual power springs from superintending and stimulating the learners to make investigations in the fields of literature, science, and art. The school should implant more than the mere desire to use the text-book. A goodly collection of books will be the motive and the means of cultivating and stimulating the pupils to push their researches. A good librarian becomes almost as essential as a good teacher; in fact, he is a most valuable teacher in such a school, for he is the head of the intellectual laboratory of the whole school. The library must contain a supply of reference books and the bibliography of the most important subjects. The small sums appropriated to the library have left it ill fitted to play its part in the intellectual development of the learner.

The high school library, in the discharge of its high mission to "implant more than a desire to use the text-book," must ever be progressive and abreast with the onward march of civilization. As has been justly said, the library is the intellectual laboratory of the whole school, where not only the learners make faithful and diligent research in the acquirement of individual power, but it is also the machine shop of the school, where the teachers may whet their weapons, and thus the more successfully lead on to victory all those contending for a place of merit in the affairs of life.

The library, therefore, being the potent factor that it is in the work of the high school, should be untrammelled in its efforts to satisfy all demands made upon it, whether in the department of literature, science, or art. At present the library is not complete in any of these departments. In the high school, where often the same field of research is being investigated by many learners at the same time, the library is often embarrassed in that many volumes stand alone, whereas if these same volumes were in duplicate the library would the more successfully render the "greatest good to the greatest number."

That "man does not live by bread alone" is a universal law; and in proportion as it is true just in that proportion is it also true that fiction plays its part in one's intellectual development. Hence, all the leading works of the best writers of this class of literature should find a welcome place in the library.

That the high school library is wanting in all of its departments will appear in this: From the inauguration of the library to the present it has depended solely upon the efforts of the pupils in concert and drill for its support and strength, except for a donation here and there and a few reference books received through the superintendent's office.

But these small sums appropriated to the library from time to time through the efforts of the pupils have been insufficient to meet its needs. Furthermore, a library that fails through any reason whatever to come into possession of the contributions made to literature, science, and art from time to time places its intrinsic value at a discount; and it is likewise true that a failure to replace all volumes that may be discarded from time to time by virtue of wear and tear, despite what

other accessions may be made, depreciates the value of the library just in that proportion.

Therefore, it is respectfully recommended that the honorable board of trustees appropriate annually out of whatever moneys they may have at their disposal a sufficient amount to build up and maintain a library worthy of the school in which it is located.

RHETORICALS.

The general work in rhetorical exercises was assigned a regular period once a week. During the first quarter the second-year class studied rhetorically Webster's Bunker Hill Orations, the aim being the oral interpretation of the thought. During the second, third, and fourth quarters the class was given selected exercises designed to improve the standard of rhetorical expression and at the same time to quicken the mind by choice and noble thoughts. The following is a list of exercises thus studied:

A Picture of Dawn. Edward Everett.
 The River Path. Whittier.
 Mind, The Glory of Man. Wise.
 Abou Ben Adhem. Hunt.
 Our Duties to the Republic. Story.
 The Builders. Longfellow.
 Duty of the American Scholar. Curtis.
 Tell Me, Ye Winged Winds. Mackey.

At the end of the first quarter the fourth-year class, and at the end of the second quarter the third-year class, gave public rhetorical exercises in the assembly hall in the presence of the whole body of students and many parents and friends of the pupils and the school. The exercises were highly creditable in every sense. They consisted of dialogues, orations, music. Similar exercises were held on Flag Day.

ENTERTAINMENTS.

In February there was held in the assembly hall a competitive drill exclusively for the noncommissioned officers of the battalion. The proceeds of the affair were for the benefit of the battalion. It was a successful entertainment from all standpoints and aroused all of that enthusiasm that usually attends military effort.

The usual annual school concert was superseded this year by a dramatic entertainment by the pupils of the fourth year, of which mention has been already made. Tennyson's Princess, dramatized for the occasion, was rendered with much artistic success. The parts were admirably interpreted and the costumes were pretty and striking. As a financial venture the entertainment was a failure. This was due, no doubt, to a combination of circumstances. The inclemency of the weather, the time of the year (May 31 and June 1), and the distance of the high school where the entertainment was given from the street-car lines

were all elements that would act against rather than in favor of such a venture.

The department of biology gave a phonograph entertainment from which a small sum was realized and used by the director for the purchase of materials to aid in carrying on his work with success.

MANUAL TRAINING.

It is a matter of regret that so few of the high-school boys take the technical course provided for in the curriculum, with its necessary prescribed work in the manual training school.

The opportunities in life for boys who have the kind of training to be secured in this course are very large at present. Schools in all our Southern States are demanding teachers who have had some training in a trade school, and who are able at the same time to do a rather high grade literary teaching. A gentleman who is the head of a teachers' bureau, with an office in this city, has sent a half dozen applications to the principal of the high school since June 1 of this year for just such teachers. They could not be furnished. The salaries attached to such positions have ranged all the way from \$600 to \$1,200 a year.

There is a large number of high-school graduates who have had no manual training, and there are plenty of graduates of the industrial schools who do not meet the requirements from a literary standpoint of these schools that are seeking teachers. There will come a day when the demand for thoroughly competent, well-educated teachers for the departments of mechanical arts in schools will not be greater than the supply. This is not a matter over which there should be any contentious quibbling, nor is this suggestion a challenge for debate as to the best kind of education for the colored boys. Here is a condition that should be met, and our school system has provided through the technical course in our high school for the combination of manual training with a scholastic training. It is hoped that the advantage of this course will soon be appreciated by our boys at its real value. At present there is no interest whatever shown in it.

COOKING SCHOOL.

The girls of the high school have taken a commendable interest in the training opened to them at the cooking school. They are well represented in this department, not by large numbers, as they should be, but in the caliber of those who make the sacrifice to learn the science of one of life's most important arts. The domestic virtues play such an important part in the life of a worthy young womanhood that it is passing strange that the mothers do not insist that their daughters should avail themselves of the advantages of the cooking school at least a part of the time that they are in the high school. It is a golden opportunity and should not be wasted. The director of the cooking school speaks in very high terms of the progress made by the young women from the high school who took the course during the year.

MILITARY.

One of the most interesting and useful features of a boy's life in the High school is his career as a cadet. The military instruction which he receives here is valuable in giving him that physical exercise so necessary to make the brain clear and the mind active, as well as that soldierly discipline that is worth so much to him both in and out of school. There is no development in school life more marked than the change that comes over the boy who starts his high-school career totally ignorant of military tactics and works his way up to a place in the military organization of the school where his proficiency wins for him the commendation of his instructor and the respect of his fellows.

About one-half of the boys took part in the military exercises during the year and formed a battalion of two companies. The kind of training they received was exemplified in the admirable way in which they performed every duty they were called upon to meet during the year.

In the great parade on the military day of the peace jubilee celebration in May, their excellent marching elicited the applause of the assembled thousands all along the line of march.

The annual prize drill was held at the National Baseball Park, May 29. In the presence of an audience of 10,000 people the two companies competed for the beautiful medal presented to the high-school cadets by the teachers of the colored schools of the District of Columbia. The contest reflected the highest credit upon both the cadets and their instructor. Company B, under the command of Capt. William Brown, won the prize, and Company A, Capt. Raymond Jackson commanding, was complimented for its good work. The drill was closed by a dress parade of the battalion under Maj. Leon Turner.

The cadets greatly appreciate the thoughtfulness that led the authorities to construct gun racks in the armory proper.

ADDRESSES.

Several distinguished men addressed the pupils of the high school during the year on subjects of great interest. Mr. Archibald H. Grimke, of Boston, Mass., former United States consul at San Domingo, presented a very scholarly paper on Charles Sumner; Dr. C. B. Purvis was the speaker for Emancipation Day; Prof. L. B. Moore, Ph. D., dean of the department of pedagogy, Howard University, spoke on "Flag Day"; Hon. George H. White, Member of Congress, was the orator on Washington's Birthday. The school was also addressed at different times by Rev. J. A. Johnson, Rev. William J. Howard, Rev. A. D. Mayo, Professor Foster, of Howard University, and Mr. John Jordan. The last-named speaker was formerly a pupil in the high school. After leaving school he enlisted in the United States Navy and studied

gunnery at the Washington and Newport schools of gunnery. At the battle of Manila, fought May 1, 1898, he was in command of two forward 8-inch guns on board the U. S. flagship *Olympia*, and it was from his turret that the first shots were fired which opened the real engagement that made Dewey great and changed his title from commodore to Admiral. On "Flag Day" Mr. Jordan gave a description of this renowned battle in a most telling and interesting way. Mrs. Cooper, Miss Gibbs, Mr. Storum, Mr. Jackson, Mr. Hayson, Dr. Bailey, Mr. Love, Mr. Thomas, Mr. Gregory, and Mr. Terrell, all teachers, addressed the school during the session. This feature was introduced by Dr. Montgomery, former principal, and proved interesting and instructive. The purpose of these talks was to bring the teachers before the pupils in some other light than simply as masters of the recitation room. It was a very happy thought. The teachers prepared their addresses with care, and the impression they made upon the minds of the pupils can not but be beneficial to them in every particular.

CLASS DAY.

The senior class held class-day exercises in the assembly hall on Thursday, June 15, 1899. The parts presented were highly creditable and showed careful preparation.

GRADUATION.

The graduation exercises were held at the Academy of Music on the evening of June 20, 1899. Ninety-two graduates received diplomas.

VISITS.

The number of visits of the trustees during the year was thirteen and of the superintendent four.

CONCLUSION.

The teachers and pupils of the high school are greatly indebted to Mr. Francis Upshur, who is connected with the office of the New York Tribune, for his generous contribution to the library in the way of daily newspapers. The school is also indebted to Mr. Lewis H. Douglass for a gift of *Memoirs of Napoleon*, by Bourrienne.

The deep interest taken in the progress of the high school by the trustees and superintendent is greatly appreciated by the principal. No school can be a success unless the men who stand at the head of its affairs give it their moral support.

R. H. TERRELL, *Principal*.

Mr. GEO. F. T. COOK,
Superintendent of Schools.

WASHINGTON, D. C., *June 30, 1899.*

DEAR SIR: In accordance with your request, I have the honor to submit the following report for Normal school under your supervision. The progress of mankind in general is the ideal toward which all thinking men are striving. That one of the surest guaranties of this progress is that marked by the advance of the profession of teaching is now generally conceded.

That the advance of the teaching profession is directly the result of the standard set and maintained by your normal schools is self-evident. Hence, anything which tends toward a better, a higher development of the normal school is directly aimed toward reaching the ideal of Christian civilization.

The profession of teaching, perhaps more than any other, requires for its pursuit proper and adequate training in all its phases—moral, spiritual, mental, and physical.

Culture is ever widening and deepening, and if we would keep pace with it in our future corps of teachers, the standard for admission into and graduation from our normal schools must be ever growing, constantly advancing; no backward steps, however subtle, must ever be taken.

When you consider that the normal student must be instructed in numerous and varied subjects, and that he must be led to an apprenticeship in teaching by model and practice lessons, and by criticisms on attempts, it must be admitted that neither time at our command nor present acquirements of students themselves are sufficient to permit us to give to them the thorough and substantial training that we desire.

And this in spite of the fact that the most careful and thorough preparation is absolutely demanded by the signs of the times for our primary and grammar school teachers.

For it is to these elementary schools that the great masses of the population come, and from these elementary teachers that the majority must get the only instruction they will ever receive.

Under the circumstances, it would seem that we are justified in pleading with the government of our school for better opportunities to work out our plan; for a higher standard of admission, both as to scholarship and maturity—I might add physical bearing and health.

Public opinion should be educated to the grave necessity for the highest and best good of the many, convinced that the well-being of the elementary schools depends upon the culture of the teachers; that this culture—moral, spiritual, mental, and physical—is largely the result of work done in your Normal school.

The teachers transmit the culture of the present to the generations of the future.

We aim to pay attention to every side of the teacher's training, and to emphasize her position as a social and personal factor in the society in which she moves.

Owing to the peculiar nature of this school a closer description will be interesting. Established in 1851 by Myrtilla Miner for the avowed purpose of training your colored women for teachers, it has steadily grown from a one-room school with one earnest, intelligent, and Christian woman teacher and a few enthusiastic young women, until to-day it is a part of your public school system, occupying one of the largest school buildings, with six zealous, well-equipped young women as assistant teachers, 111 students in junior and senior classes of normal department, and 320 children in training schools.

The course changed from one to two years. None but graduates from high school admitted as students.

After two years' theoretical and practical training, we feel that they leave with a fuller knowledge, a clearer insight, and greater skill in school methods.

We fear, however, that the tendency to admit indiscriminately all graduates from the high school will greatly lower the standard of scholarship, which will in the near future work seriously to the detriment of your teaching corps.

The plan of instruction, following your prescribed course, has been so arranged as to bring it into intimate union with the public schools and to complete or extend the latter wherever gaps had been left or where the need for completion or extension was felt.

NORMAL TRAINING SCHOOLS.

I. A review of each branch of study pursued in the elementary schools, for the purpose of making topical outlines, logically arranged.

II. Psychology and pedagogics.

III. A study of each branch of education pursued in the elementary schools to determine the order of presentation of the various parts thereof, and the relative importance of each part.

IV. Methods of instruction and practice in teaching.

V. Preparation of lessons and larger units of work for criticism; oral and written criticisms of teaching and of prepared work.

VI. Special preparation in writing on blackboard and rapid sketching for illustration and representation.

VII. The preparation and care of appliances.

VIII. Hygiene of the schoolroom; physical care of the pupils.

IX. Educational literature, its value and use.

X. Lectures on moral training and example.

In order to have due regard to every side of the needed training the practical development had to be separated from the theoretical and without lowering the standard of either, but raising each considerably. Mere observation and practical experiment can never lead the teacher far on the right educational path. History is full of the errors in the older methods of attempts at educating the young without the aid of

a profound and scientific study of the human mind and its laws. All the modern educational reformers ground their plea for reform on a deeper study of children's minds.

The chief aim of the teacher is the development of the good will through an educated mind. It must then be evident that the teacher must have a knowledge of the ways in which mind works and of the action of external forces in exciting as well as in altering the directions of mental activities. Merely empirical knowledge will carry us but a little way in realizing the true end of the teacher, for the child, whose special business it is to develop, is the most complex of all living beings. She who has a rational knowledge of the child's mind as a whole, and as a part of a connected system which interact one upon the other in a very intricate and puzzling manner, and of the variability which we call individuality, has a criterion by which she may test the soundness of existing rules and practices, a constant suggestion of larger views of her work, better methods of training, new avenues of educational experiments, and can better carry out the further development of the art of teaching. Hence psychology and physiology are made the basis of our theoretical training—logic, principles of instruction, principles of education, didactics, and special methods in all the prescribed school subjects. It is quite plain to be seen that these subjects can be taught with greater compass and penetration than is the case in schools below the normal, because of the greater maturity and broader culture of students.

Methods in language and mathematics are divided in two courses—the first of pure method; the second gives general didactics in so far as it is dependent on the matter to be taught. Practice and teaching follow to explain and complete all theoretical instruction.

COURSE OF STUDY.

Study.	Hours per week.	Number of weeks.	Study.	Hours per week.	Number of weeks.
Physiology of nervous system	5	10	Geology	2	10
Psychology	5	30	Zoology	2	10
Vocal culture	3	30	Advanced arithmetic	3	10
History of pedagogy	2	30	United States history	2	10
Philosophy of education	2	20	Penmanship	1	40
Theory of methods	2	20	School management	2	10
Observation	1	20	Music	{ <i>a</i> Daily.	30
Practice	Daily.	30	Drawing	1	40
Physiology	2	20	Physical culture	{ <i>a</i> Daily.	30
English grammar	•Daily.	30	Logic	1	40
Physical geography	2	10		<i>b</i> 1	10

a Ten minutes.

b Seniors.

Observation of another's power is a powerful factor for stimulating self-improvement; therefore one hour per week for ten weeks is allowed for visitation. This gives the opportunity for observing method teach-

ers illustrate principles of education and instruction, thus gathering material valuable for their own practice. Trial lessons by pupils themselves follow visitation. Criticisms, led by method teacher, follow immediately. The lesson is discussed from following outline:

- I. Subject-matter, value and fitness.
 - II. Correlation.
 - III. Method, aim, preparation, presentation.
 - IV. Results.
 - V. Government of class.
 - VI. Teacher's manner; pupils' manner.
 - VII. Summary of good and bad points.
 - VIII. Principles of education and instruction used or violated.
- Nothing can be defended unless based upon principles of education and instruction.

Nothing can be destroyed which can not be reconstructed and reasons assigned.

Practice in any intelligent form of activity increases the quality of the work done in that form.

Detailed plans are written out long before pupil is permitted to practice and thoroughly discussed by class and teacher of methods. In this way we lay the foundation for the ideal recitation. Actual teaching and real managing is done during the first three quarters of senior year. Same care is exercised in plans and criticisms as in junior year. Every Friday afternoon two seniors present criticism of work done during week. Student teacher defends her course and presents criticism on her own practice. Method teacher plans work for succeeding week and gives suggestions as to material, management, etc.

The normal school must utilize every known means for the accomplishment of its aim to train teachers. Hence we have invited noted men and women to address the students upon special and current topics. Among those who have accepted and given us most valuable suggestions were Dr. A. D. Mayo, Dr. J. E. Rankin, Dr. L. R. Klemm, Mr. W. B. Powell, Prof. L. B. Moore, A. Grimke, esq., Mrs. R. H. Terrell, Rev. A. C. Garner, and Dr. C. B. Purvis, to each and all of whom we owe a debt of gratitude.

GRADED TRAINING SCHOOLS.

Our practice work is limited to first three primary grades. We have had three schools of each grade under the supervision of a training teacher, thus giving us nine practice schools for twenty-five seniors. This class by virtue of its small number will give to each an unusual amount of consecutive and sustained practice which I have no doubt will give you a fine addition to your teaching corps. Each student has been faithful to her trust and done the best she could.

The task of the practice teacher is a severe one. It calls for endless patience, tact in dealing with young ladies and gentlemen as well as

small children, a large fund of general and special information; strong personality to be able to control and to teach the little ones, through the pupil teacher; sympathetic, hopefulness, suave in manner, coupled with great firmness and positiveness of character. In proportion as she possesses these qualifications will she succeed. Hence the wide difference in the results obtained in our graded practice schools.

The faculty of the normal school should be a unit on all points of vital importance. The assistants should be selected and retained because of personal fitness in adaptability and culture. They should be a help and not a hindrance to the principal. They should be so broadly educated that they can intelligently comprehend the vast importance of the effect of good example in every particular before these pupil teachers; competent to show discretion and prudence in the management of their part of the assigned work; generous in spirit and capable of filling any post in the school to which they may be assigned. Here in the normal school must the standard be set and maintained.

Without these qualifications it is doubtful whether anyone can ever succeed in truthfully assisting in a normal school.

I append a few statistics to show status of practice schools:

Annual report.

	Third grades.		
	Male.	Female.	Total.
Number of reentries during the year.....	45	43	88
Whole number on the roll during the year	90	132	222
Number transferred.....	44	87	131
Actual number on the roll.....	46	45	91
Number withdrawn during the year	9	3	12
Number of seats forfeited during the year	45	48	93
Number of pupils dismissed during the year.....	0	0	0
Number at the close of the year.....	37	37	74
Average number on the rolls during the year	40.5	39	79
Average number in daily attendance.....	38.1	36.7	75
Per cent of attendance.....			93.8
Number of cases of tardiness			65
Number of pupils present and punctual every session during the year...			1
Average age of pupils	9.8	9.2	9.5
Visits of parents.....			214

Annual report—Continued.

	Second grade.		
	Male.	Female.	Total.
Number of reentries during the year	66	69	135
Whole number on roll during the year.....	103	122	225
Number transferred.....	49	69	118
Actual number on roll	54	53	107
Number withdrawn during the year.....	4	5	9
Number of seats forfeited during the year	75	71	146
Number at the close of the year.....	41	46	87
Average number on the rolls during the year.....	45	46	91
Average number in daily attendance.....	41	42	83
Per cent of attendance.....			91.8
Number of cases of tardiness.....			173
Number of pupils present and punctual every session during the year.....			0
Average age of pupils.....	8.7	8.5	8.6
Visits of parents.....			141

	First grade.		
	Male.	Female.	Total.
Number of reentries during the year	82	99	181
Whole number on the roll during the year.....	107	114	221
Number transferred	44	50	94
Actual number on the roll.....	63	67	130
Number withdrawn during the year	7	5	12
Number of seats forfeited during the year	97	107	204
Number of pupils dismissed during the year.....	0	0	0
Number at the close of the year.....	41	54	95
Average number on the rolls during the year.....	47	54	101
Average number in daily attendance.....	43	49	92
Per cent of attendance.....			90.8
Number of cases of tardiness			128
Number of pupils present and punctual every session during the year.....			0
Average age of pupils.....	6.9	6.7	6.6
Visits of parents.....			180

NEEDS.

We are greatly in need of educational literature, books, magazines, papers; more text-books; a retiring room for normal pupils.

RECOMMENDATIONS.

I. That number and size of training schools be one of the most important factors in determining number of admissions to normal school.

Teaching is a fine art as well as a science, and no man can acquire skill in any art or a science without the opportunity to practice.

The practice school is the workshop where assimilated pedagogical knowledge is tested.

The child is the center in education. Hence the main work of a normal school is to give to its students an opportunity to study and interpret the child as an individual and as a social factor. Nowhere can this be so well done as in the practice school, under the wise guidance of an earnest and sympathetic trainer.

To ask one to make teachers on theory is asking the impossible, "to make bricks without straw."

No objections can be made by any intelligent observer to admission of any number of students to a normal school, provided they are well equipped in basic knowledge and matured enough in thought to appreciate the work done therein.

But you must proportionally increase your practice department. Let the ratio never be less than 1:3, if you desire real normal work to be done.

II. After graduation from the high school give a rigid written and oral examination in the following subjects: Language, including principles of grammar, composition, spelling, and literature; arithmetic, a test of their knowledge; biology, zoology, mineralogy, physics, and chemistry.

Admit all who make an average of 80 per cent and over.

I wish to also suggest that those students who do not take a full course in these studies be not allowed to enter examination.

III. Let normal school faculty sift the school after examinations on three quarters' work by requesting those who do not make an average of 80 per cent in quarterly examinations to retire.

If you will adopt and enforce these suggestions you will give normal school your best material to prepare for teachers and enable us to protect the natural rights of the little ones intrusted to our care.

IV. That some fixed standard be decided upon for ranking our practice schools and practice teachers. That some official be designated to do the marking and report to your high and normal school committee.

V. That more attention be given in our graded and high schools to the correct pronunciation of English language.

Reading can not help in the correct speaking of words.

We no longer have a class of people like the cultured lecturers of a generation ago, who, by their attention to the minutest detail, were models of correct usage from whom the young might learn. Therefore, the teacher should be the model, and neither carelessness nor a fear of seeming affectedness, nor a belief that unrestrained usage will take the best way should be accepted as an excuse for his shortcoming.

Pronunciation should form a part of every daily programme.

I transmit herewith reports from my assistants in normal department briefly describing their work.

I am greatly indebted to them and teachers generally for hearty, sympathetic cooperation.

For past kindnesses and assistance I trust you and the committee on high and normal schools will accept our gratitude.

Statistics for normal schools.

	Male.	Female.	Total.
Whole number on the roll during the year	13	57	70
Number transferred	0	0	0
Actual number on the roll	13	57	70
Number withdrawn during the year	0	1	1
Number of seats forfeited during the year	3	5	8
Number of pupils dismissed during the year	0	0	0
Number at the close of the year	13	57	70
Average number on the roll during the year	13	56	69
Average number in daily attendance	13	56	69
Per cent of attendance			98.2
Number of cases of tardiness			11
Number of pupils present and punctual every session during the year			10
Average age of pupils	20.3	19.0	
Number of reentries during the year <i>a</i>	3	6	9

Very respectfully,

LUCY E. MOTEN.

Mr. G. F. T. COOK, *Superintendent, etc.*

DRAWING.

WASHINGTON, D. C., *June 30, 1899.*

DEAR SIR: At the close of the year we are expected to make a report of the events of the school term. Such a requirement under unfavorable circumstances would be an unpleasant duty, but when the work is supplemented by pleasant surroundings it becomes a real pleasure to submit a brief report of the actual facts connected with the last ten months of school life.

As usual, the time was spent in presenting the various subjects outlined in the course of study. The methods used in this work were about the same as practiced in the public schools generally.

As much time as possible was given by the special teachers to classes of pupils of all grades. The teachers were carefully instructed as to the manner of conducting the lessons during the absence of the special teacher. It can be safely said that no study under the direction of a department can expect to succeed without honest cooperation from the regular teachers. It is gratifying to be able to say that they did their work willingly and in almost every case with personal interest and pride. Under such conditions the work was not only agreeable but, I trust, beneficial to all concerned.

All schools from the third through the eighth, except a few half-day schools, were visited every two weeks; first and second grades about once a month. The first and second grades need more supervision; one or two of the young teachers from the normal school would be of great service to these schools.

I deem it unnecessary to discuss the benefits derived from the study of drawing; the general correlation of drawing with other studies all over the country testifies to its value as a factor in education.

The introduction of color in the first four grades has added considerable interest to the work. It is to be hoped that all grades will be furnished with color as soon as possible. Color in connection with nature work gives it a charm not attainable in any other way.

I regret to say that on account of additional grade work I was obliged to suspend the special classes in the high school.

Of the normal classes I can only say they have been good and faithful pupils.

For every act of kindness and best wishes from you and all school officers accept my sincere thanks.

Very respectfully,
Mr. G. F. T. COOK,
Superintendent.

T. W. HUNSTER,
Director of Drawing.

MANUAL TRAINING.

WASHINGTON, D. C., *June 30, 1899.*

DEAR SIR: The manual-training department of the ninth, tenth, and eleventh divisions made good progress during the year. Nine hundred and seventy boys from the different grammar schools and the high school were instructed in metal work and carpentry two hours a week since September.

WOODWORK.

Each tool when it is first used is described, the different parts named, and the way to hold and use it is explained. After a boy has learned how to use a tool he is shown how to sharpen it on the oilstone, and is required to keep it in good order—such tools as planes, handsaws, chisels, gouges, braces and bits, hammers, gauges, knives, etc.

In the wood-working shops the course of instruction has been followed by squaring and trimming a piece of lumber 3 inches wide, seven-eighths of an inch thick, and 8 inches long, mortising and tenoning, dovetailing, inlaying, molding by hand, ogee, crown ogee, and nosing. The lessons included instruction on the nature and use of tools, instruction and practice in shop drawing, elementary work with plane, chisel, saw, different kinds of joints, timber splices, cross joints, mortise and tenon, miter and frame work, examples in building, framing roof trusses, making small articles of furniture, and cabinetwork.

WOOD TURNING.

A course in wood turning extended through a part of the second, third, and fourth years. The lessons comprised, first, nature and use of lathe and tools, plain and straight turning, caliper work to different diameters and lengths, simple and compound curves, screw plates and chuck work, hollow and spherical turning; second, a variety of whole and split patent core work, giving the pupils practice in forming irregular shapes in wood with lathe and carving tools, as well as familiarity with the nature and use of pattern for molding.

METAL WORK.

The metal department consists of a steam engine and boiler, 6 lathes, 1 planer, 1 shaper, 1 drill press, 1 emery grinder, 1 milling machine, 8

forges, 11 anvils, 11 vises, and the usual number of miscellaneous small tools found in a plant of this kind. The exercises in the forging and machine laboratories consist of the forging of small articles of soft iron and steel tools, with instruction in the simpler methods of manufacture of iron and steel, practice in welding iron and steel, hardening and tempering steel, and in brazing. In the machine department lessons are given in plain and cylindrical turning to various diameters and lengths, taper turning, and the use of the scroll and universal chucks and face plate; drilling, both in drill press and lathes; screw cutting with lathe, stock, and dies; planing and milling to various forms. In addition to the above, we have steam engineering, foundry work of brass, and iron casting.

Several lectures have been given to all classes.

SPECIAL WORK.

Kindergarten tables and sand trays were made in this department. Twenty-four book cases were also made for the use of the graded schools, and special work for the Normal school.

Very respectfully,

Mr. C. F. T. COOK,
Superintendent of Schools.

JAMES H. HILL,
Director of Manual Training.

COOKING.

WASHINGTON, D. C., *June 30, 1899.*

DEAR SIR: To you is herewith submitted the following brief report of the cooking department for 1898-99. There were enrolled 838 girls, of whom 450 came from the seventh grade, 339 from the eighth grade, and 49 from the high school. These pupils were distributed as follows:

Name of teacher.	Where teaching.	Pupils received from—	Number of pupils taught.	Number of classes.	Number of lessons given.	Cost of food products.
Miss M. E. Ware.	Randall School, 1st and I streets sw.	Randall, Bell, Lincoln, and Giddings schools.	185	8 seventh and 6 eighth grade.	384	\$51.00
Miss Helen Johnson.	Stevens School, 21st, between K and L streets nw.	Sumner, Stevens, Briggs, Wormley, and Phillips.	209	9 seventh and 6 eighth grade.	459	73.18
Miss Ella Freeman.	917 P street nw. (school No. 1).	Sumner, Garrison, Garnet, Patterson, J. F. Cook, Slater, Jones, Banneker, and high schools.	241	9 seventh grade, 6 eighth grade, and 2 high school.	385	67.66
Miss L. A. Parker.	917 P street nw. (school No. 2).	Sumner, Garrison, Garnet, Patterson, J. F. Cook, Slater, Jones, Banneker, and high schools.	203	8 seventh grade, 6 eighth grade, and 1 high school.	373	59.99

This department opened under somewhat favorable circumstances, and notwithstanding the many unavoidable breaks made upon us during the term we have in the main covered our course of instruction, and with some very good results.

By the addition of the many needed articles furnished this year we were the better enabled to forward our aim to improve the work. From careful study of the condition, home life, and daily diet of our pupils, it is clearly seen that to make this branch of training most beneficial it must be in every detail practical, and the lessons were planned to this end, including as much of the theory as is necessary to perfect the practice.

The results in both theory and practice show progress that is very satisfactory and pleasing. This was very fully demonstrated in the bread and cake review in December, the practice dinners in May, and the food exhibit in June, the success of each being due not alone to the thorough training given by the cooking teachers, but also to the interest and hearty cooperation given this department by the school officials, regular teachers, and parents, for which and to whom we extend our deepest gratitude.

The time allowed the morning classes is by far too limited, and we would be glad to have it extended. As it is, we find that to be able to teach and have the child use correct methods for doing or performing the many details connected with the work it is both essential and fitting that each laboratory be furnished every practicable convenience for securing the amount of necessary practice in the allotted time.

Just here I beg to state that owing to the very poor supply of water in the vicinity of the P street schools we were forced (for safety) to detach the boiler from the range in the school on the second floor. Thus, two schools had to be furnished hot water from one boiler. Not only was the school on the first floor frequently interrupted and annoyed, but at times the water in the one boiler would be so low as to occasion alarm. It would be advisable to remove this trouble if possible. A double cupboard built or placed in each of the P street schools to take the place of the present ones (used since the cooking schools were first opened and which are too small to hold the outfit belonging to the kitchen) would be a source of great convenience to pupils and teachers.

The attendance throughout the year has been good, even by pupils who live remote distances. We regret the large number of withdrawals on account of distance, which can only be obviated by placing a kitchen near the schools from which these pupils come. The Stevens kitchen is overcrowded and should be relieved by a kitchen in the Miner Building or its locality.

Very respectfully,

MATTIE B. COOK,
Director of Cooking.

Mr. G. F. T. COOK,
Superintendent.

SEWING.

WASHINGTON, D. C., *June 30, 1899.*

DEAR SIR: I respectfully submit the following report of the sewing department of the ninth, tenth, and eleventh divisions. The interest and love for the work in this department by both teachers and pupils are manifest, and results encouraging.

Being still confined to a four-years' course, which embraces three years in plain sewing and one year in the cutting schools, but few changes or additional work have been attempted.

A close adherence to the fundamental principles of sewing has been observed. A great deal of drill work in the handling of tools and management of the cloth have been introduced; especially has this been done in the first-year work.

The second and third year classes have each received similar careful instruction, and lessons in patching, seaming, gathering, gusset setting, and darning, together with the drafting and making of simple garments in miniature form, have been given.

The classes in the cutting and fitting schools have done very satisfactory work. The general attendance has been excellent. Pupils are always anxious to be admitted, and the distance from their respective school buildings and homes—even in inclement weather, seems not to hinder or cause them to become indifferent. Not only does this eagerness to learn manifest itself in the cutting schools, but in their homes they apply the well-learned lessons, and many girls assist with the cutting and making of their dresses.

I have devoted a great deal of time investigating as to what extent sewing is carried on in the homes. By constant talks to the classes upon the importance of home work and urging upon the girls the necessity of devoting a part of each week—especially some convenient hour on Saturdays—in assisting with the family mending I find that a great deal of practical work is done as a result of the training received in our schools.

In a number of instances I have visited the homes and been encouraged from the reports parents have given me of the help their girls are to them with their needles.

Helpful talks have been given from time to time upon tools and textiles, as to their origin and development. In many cases these talks have been given in story form.

Regular teachers' meetings, numbering ten in all, have been held monthly during the year. At these meetings the best methods have been discussed and adopted, together with other matters that tend to increase interest and bring about successful results.

Teachers have promptly attended these meetings and shown a willingness to do everything for the advancement of the work.

Programs have been more easily adjusted than ever before. There has been no crowded condition, the teaching force being sufficient to reach all schools.

All programmes save one were so arranged as to close the week's work on Fridays at 2 p. m., thus enabling teachers ample time to reach the Sumner Building by 3 o'clock to attend meetings or receive supplies, as the case would suggest.

In every instance meetings occurred on Fridays.

This arrangement of programmes prevented us from having to omit classes in sewing, as had been heretofore done, when meeting days occurred.

The teacher whose programme was filled up to 3 p. m. on Fridays was Miss A. E. Thomas, who was detailed, with your permission, 8 hours per week to prepare the models for the classes.

During the year the department has received flattering criticisms upon the work executed and methods adopted.

The following schools applied for samples of work, which in every instance were promptly supplied:

Dorland Institute, Hot Springs, N. C.; State Normal School, Milwaukee, Wis.; Battle Creek College, Battle Creek, Mich., and public schools, Lynchburg, Va.

It is very encouraging to know that future appointments in the department are to be made upon a competitive examination. The head of any department is dependent upon his or her coworkers for successful work. If this support is weak in any way, satisfactory results can not be expected.

A competent teaching force is not only a stimulus, but a necessity, and such help does away with the constant worry and anxiety that would otherwise occur.

Again, it is no more than right that applicants should be given some test whereby they can prove their proficiency for the positions they seek.

During the year each teacher's work was carefully examined, and found to be satisfactorily done. In several instances I noticed marked improvement.

The tables below will show in detail the work of teachers and pupils.

Number of lessons given to all classes.....	4,478
Number of lessons given to classes of pupils:	
Third grade	1,316
Fourth grade	1,030
Fifth grade.....	965
Sixth grade.....	0
In shops.....	1,167
Total.....	4,478
Number of shops.....	3
Number of visits for supervision.....	213
Number days teachers absent.....	12

Amount of work completed.

Number of models:		
Third grade	.....	5,799
Fourth grade	.....	3,992
Fifth grade	.....	3,594
Sixth grade	.....	0
Shops	.....	5,888
Total	.....	19,273

N. B.—Paper models are not included in the above count.

Number of pupils instructed.

	Third grade.	Fourth grade.	Fifth grade.	Sixth grade.	Shops.	Total.
E. M. Thomas	45	0	0	0	152	197
A. E. Thomas	57	253	84	0	0	394
M. G. Lewis	154	128	136	0	0	418
A. Alexander	243	127	136	0	0	506
S. A. Goines	25	42	41	0	160	268
M. E. Griffin	18	38	31	0	158	245
L. A. Hamer	147	120	157	0	0	424
J. E. Anderson	158	122	94	0	0	374
Total	847	830	679	0	470	2,826

Weekly schedule of teachers.

	Third grade.	Fourth grade.	Fifth grade.	Cutting schools or shops.	Total.	Number of periods per week.	Number of periods employed per week.	Number of periods unemployed per week.	Number of schools alternating.	Number of schools doubled.
E. M. Thomas	3	0	0	13	16	17	16	1	0	0
A. E. Thomas	4	5	4	0	13	21	21	0	0	0
M. G. Lewis	8	6	6	0	20	20	19	1	0	2
A. Alexander	9	5	5	0	19	20	19	1	0	0
S. A. Goines	1	2	2	11	16	17	16	1	0	0
M. E. Griffin	1	2	1	12	16	18	16	2	0	0
L. A. Hamer	6	5	6	0	17	20	17	3	0	0
J. E. Anderson	8	6	4	0	18	20	18	2	0	0
Total	40	31	28	36	135	153	142	11	0	2

Respectfully,

CARRIE E. SYPHAX,
Director.

Mr. G. F. T. Cook,
Superintendent of Schools.

312 PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA.

Name.	Location.	Style of building.	Size.	Description.
			<i>Feet.</i>	
High schools:				
Central	O between 6th and 7th streets nw.	Brick	197 by 75	Three stories and basement.
Eastern	7th and C streets se	.....do	86 by 164	.....do
Western	35th and T streets nw.	.....do	69½ by 174½	.....do
First division:				
Adams	R street between 17th street and New Hampshire avenue nw.	.....do	73 by 83	Two stories and basement.
Berret	14th and Q streets nw.	.....do	50 by 100	Three stories and basement.
Dennison	R between 13th and 14th streets nw.	.....do	92 by 89	.....do
Force	Massachusetts avenue between 17th and 18th streets nw.	.....do	90 by 73	.....do
Franklin	13th and K streets nw.	.....do	148 by 79	.....do
Harrison	13th between V and W streets nw.	.....do	75 by 101	Two stories and basement.
Phelps	Vermont avenue between T and U streets nw.	.....do	70 by 84	.....do
Thomson	12th between K and L streets nw.	.....do	91 by 28	Three stories and basement.
Second division:				
Abbot	New York avenue and L street nw.	.....do	102 by 42	.....do
Eckington	1st and Quincy streets ne.	.....do	72 by 94	Two stories and basement.
Henry	O between 6th and 7th streets nw.	.....do	89 by 73	Three stories and basement.
Morse	R and 5th streets nw.	.....do	81 by 69	Two stories and basement.
Polk	7th and P streets nw.	.....do	70 by 84	.....do
Seaton	I between 2d and 3d streets nw.	.....do	94 by 69	Three stories and basement.
Twining	3d between N and O streets nw.	.....do	81 by 69	Two stories and basement.
Webster	10th and H streets nw.	.....do	107 by 84	Three stories and basement.
Third division:				
Brent	3d and D streets se.	.....do	81 by 69	Two stories and basement.
Carbery	5th between D and E streets ne.	.....do	70 by 84	.....do
Hilton	6th between B and C streets ne.	.....do	57½ by 93½	.....do
Lenox	5th street and Virginia avenue se.	.....do	70 by 83	.....do
McCormick	3d between M and N streets se.	.....do	55 by 55	.....do
Maury	B between 12th and 13th streets ne.	.....do	70 by 84	.....do
Peabody	C and 5th streets ne.	.....do	90 by 90	Three stories and basement.
Seventh and G streets se.		.....do	40 by 22	Two stories

How heated.	When erected.	No. of rooms.	Size of site. <i>Sq. feet.</i>	Value of site.	Cost of building.	Total cost.
Steam.....	1883	60	96,300	\$137,625.00	\$118,078.00	\$255,703.00
do.....	1891	33	(a)	(a)	77,000.00	77,000.00
Furnace and steam.....	1898	32	116,598	30,000.00	101,084.36	131,084.36
Furnace.....	1888	8	11,460	17,240.00	26,652.00	43,892.00
do.....	1889	9	5,000	15,000.00	25,048.50	40,048.50
Steam.....	1884	12	24,648	23,200.00	45,181.00	68,381.00
do.....	1879	12	21,828	60,000.00	36,215.00	96,215.00
do.....	1869	21	14,946	41,100.00	188,000.00	229,100.00
Furnace.....	1890	8	11,540	19,200.00	27,796.00	46,996.00
do.....	1887	8	11,468	19,466.00	24,521.00	43,987.00
do.....	1877	6	3,229	6,780.00	8,000.00	14,780.00
do.....	1876	9	6,448	16,120.00	20,000.00	36,120.00
do.....	1898	8	13,500	10,800.00	28,383.74	39,183.74
Steam.....	1880	12	(b)	(b)	45,000.00	45,000.00
Furnace.....	1883	8	18,318	11,500.00	23,670.00	35,170.00
do.....	1891	8	(b)	(b)	27,000.00	27,000.00
Steam.....	1871	11	18,750	24,375.00	35,000.00	59,375.00
Furnace.....	1883	10	18,717	11,230.00	24,070.00	35,300.00
Steam.....	1884	12	8,418	21,000.00	41,053.00	62,053.00
Furnace.....	1883	8	8,500	8,500.00	22,065.00	30,565.00
do.....	1887	8	11,751	8,800.00	29,980.00	38,780.00
do.....	1898	8	7,500	11,000.00	28,368.25	39,368.25
do.....	1889	8	10,928	5,500.00	25,135.00	30,635.00
do.....	1870	4	13,575	4,395.00	7,000.00	11,395.00
do.....	1886	8	18,792	6,000.00	25,798.00	31,798.00
Steam.....	1879	12	14,620	21,900.00	38,150.00	60,050.00
Stoves.....	1840	2	3,163	2,370.00	1,200.00	3,570.00

a Part of Wallach site.

b Part of Central high school site.

Name.	Location.	Style of building.	Size.	Description.
Third division—Continued.			<i>Feet.</i>	
Towers	8th and C streets se....	Brick	56 by 104	Two stories and basement.
Wallach	D between 7th and 8th streets se.	do	99 by 76	Three stories and basement.
Fourth division:				
Amidon	F and 6th streets sw....	do	81 by 69	Two stories and basement.
Bradley.....	13½ between C and D streets sw.	do	70 by 84	do
Greenleaf.....	4½ between M and N streets sw.	do		do
Jefferson	D and 6th streets sw....	do	172 by 88	Three stories and basement.
Potomac.....	12th street between Maryland avenue and E streets sw.	do	72 by 32	Two stories.....
Smallwood.....	I between 3d and 4½ streets sw.	do	70 by 83	Two stories and basement.
Fifth division:				
Addison	P between 32d and 33d streets nw.	do	54 by 98	do
Corcoran.....	28th street between M street and Olive avenue nw.	do	68 by 82	do
Curtis	O, between 32d and 33d streets nw.	do	97 by 79	Three stories and basement.
Fillmore.....	35th, between U and V streets nw.	do	70 by 84	Two stories and basement.
Grant.....	G, between 21st and 22d streets nw.	do	92 by 88	Three stories and basement.
High street.....	35th and S streets nw....	Frame	58 by 30	Two stories.....
Jackson	U, between 30th and 31st streets nw.	Brick	70 by 84	Two stories and basement.
Threlkeld.....	36th street and Prospect avenue nw.	do	75 by 29	Two stories.....
Toner.....	24th and F streets nw ..	do	67 by 85	Two stories and basement.
Weightman.....	M and 23d streets nw....	do	76 by 83	do
Sixth division:				
Arthur	Arthur place, between B and C streets nw.	do	67 by 83	do
Blair.....	I, between 6th and 7th streets ne.	do	70 by 84	do
Blake.....	North Capitol, between K and L streets nw.	do	70 by 84	do
Gales	1st and G streets nw....	do	90 by 66	do
Hamilton (county).....	Bladensburg road	do		Two stories.....
Hayes	5th and K streets ne....	do	70½ by 93½	Two stories and basement.
Langdon (county)	Langdon, D. C. (Queens Chapel road).	Frame		Two stories.....
Madison	G and 10th streets ne....	Brick	70 by 84	Two stories and basement.

How heated.	When erected.	No. of rooms.	Size of site. <i>Sq. feet.</i>	Value of site.	Cost of building.	Total cost.
Furnace.....	1887	8	(a)	(a)	\$24,999.00	\$24,999.00
Steam.....	1864	12	96,760	\$106,436.00	40,000.00	146,436.00
Furnace.....	1882	8	8,953	7,835.00	18,232.00	26,067.00
do.....	1887	8	13,189	6,594.00	24,992.00	31,586.00
do.....	1896	8	15,000	d 10,500.00	24,527.00	35,027.00
Steam.....	1872	20	69,788	38,400.00	72,000.00	110,400.00
Stoves.....	1870	4	5,837	2,918.00	4,500.00	7,418.00
Furnace.....	1888	8	14,190	8,519.00	26,652.00	35,171.00
do.....	1885	8	12,450	7,470.00	29,313.00	36,783.00
do.....	1889	8	14,400	7,700.00	25,952.00	33,652.00
Steam.....	1875	11	24,396	18,500.00	60,000.00	78,500.00
Furnace.....	1892	8	18,204	9,925.00	27,046.46	36,971.46
Steam.....	1882	12	21,033	16,826.00	40,428.00	57,254.00
Stoves.....	1853	4	7,296	4,330.00	3,000.00	7,330.00
Furnace.....	1880	8	17,825	10,700.00	28,731.00	39,431.00
Stoves.....	1868	4	5,068	3,500.00	5,000.00	8,500.00
Furnace.....	1898	8	10,710	8,763.50	29,055.29	37,818.79
do.....	1886	8	13,712	13,712.00	29,324.00	43,036.00
do.....	1889	8	19,590	15,672.00	27,652.00	43,324.00
do.....	1884	8	22,013	6,600.00	22,071.00	28,671.00
do.....	1887	8	10,995	9,985.00	24,973.00	34,958.00
Steam.....	1881	12	12,764	22,300.00	40,116.00	62,416.00
Stoves.....	1881	4	32,670	800.00	4,000.00	4,800.00
Furnace.....	1897	8	13,671	9,999.45	28,979.61	38,979.06
Stoves.....	1897	4	43,560	800.00	7,964.11	8,764.11
Furnace.....	1889	8	9,980	6,468.00	25,644.00	32,112.00

a Part of Wallach site.

Name.	Location.	Style of building.	Size.	Description.
<i>Feet.</i>				
Sixth division—Continued.				
Pierce	G and 14th streets ne...	Brick.....	70 by 84	Two stories and basement.
Taylor.....	7th, between F and G streets ne.	.....do.....	70 by 84	.....do.....
Seventh division (county):				
White—				
Brightwood.....	Brightwood, D. C.....	.....do.....	.....	.....do.....
Bunker Hill road	Bunker Hill road .....	.....do.....	.....	One story.....
Brookland	Brookland, D. C.—Lansing and Wallace streets.	.....do.....	.....	Two stories and basement.
Chevy Chase	Connecticut avenue extended.	Frame.....	.....	Two stories.....
Conduit road	Conduit road.....	.....do.....	.....	One story.....
Johnson	School and Grant streets, Mount Pleasant.	Brick.....	.....	Two stories and basement.
Monroe.....	Stenben street, between Brightwood and Sherman avenues nw.	.....do.....	70 by 84	.....do.....
Mount Pleasant	School street, Mount Pleasant.	Frame.....	.....	Two stories.....
Reservoir.....	Conduit road.....	.....do.....	.....	.....do.....
Tenley.....	Tenley, D. C.....	Brick.....	.....	Two stories and basement.
Woodburn.....	Riggs road, near Blair road.	.....do.....	.....	.....do.....
Colored—				
Brightwood.....	Military road, near Brightwood.	Frame.....	.....	One story.....
Bruce.....	Marshall street, between Brightwood and Sherman avenues nw.	Brick.....	71½ by 86	Two stories and basement.
Fort Slocum	Blair road.....	Frame.....	.....	One story.....
Grant road	Grant road between Tenley and Connecticut avenue extended.	.....do.....	.....	.....do.....
Ivy City.....	Ivy City, D. C.....	.....do.....	.....	.....do.....
Chain Bridge road...	Chain Bridge road, near Conduit road.	.....do.....	.....	.....do.....
Mott.....	Trumbull and 6th streets nw.	Frame and brick.	.....	Two stories.....
Wilson	Central avenue, between Erie and Superior streets nw.	Brick.....	70 by 84	Two stories and basement.
Eighth division:				
White (city)—				
Buchanan	E, between 13th and 14th streets se.	.....do.....	.....	.....do.....
Cranch	12th and G streets se...	.....do.....	70 by 36	Three stories and basement.
Tyler.....	11th between G and I streets se.	.....do.....	70 by 84	Two stories and basement.

How heated.	When erected.	No. of rooms.	Size of site. <i>Sq. feet.</i>	Value of site.	Cost of building.	Total cost.
Furnace.....	1894	8	10,000	\$10,000.00	\$26,152.00	\$36,152.00
do.....	1891	8	12,650	8,475.50	26,524.50	35,000.00
Steam.....	{ 1888 1896 }	8	18,234	5,470.00	20,885.00	26,355.00
Stove.....	1883	1	42,560	900.00	2,700.00	3,600.00
Furnace.....	{ 1891 1896 }	8	15,000	2,475.00	21,552.00	24,027.00
Stoves.....	1898	4	40,000	6,000.00	9,837.48	15,837.48
do.....	1874	1	10,890	\$1,089.00	1,200.00	2,289.00
Furnace.....	1895	8	(a)	(a)	28,846.47	28,846.47
do.....	1889	8	15,000	4,500.00	23,988.00	28,488.00
Stoves.....	1871	4	25,530	12,265.00	9,300.00	21,565.00
do.....	1897	4	89,760	2,000.00	5,992.18	7,992.18
Steam.....	{ 1882 1896 }	8	43,560	10,890.00	27,920.00	38,810.00
Stoves.....	1896	5	22,174	2,696.50	10,210.00	12,906.50
do.....	1865	2	43,560	3,500.00	1,200.00	4,700.00
Furnace.....	1898	8	30,000	7,650.00	29,083.13	36,733.13
Stoves.....	1867	1	21,780	1,089.00	500.00	1,589.00
do.....	{ 1864 1880 }	2	43,560	4,356.00	1,200.00	5,556.00
do.....	1896	2	7,200	3,600.00	2,604.38	6,204.38
do.....	-----	1	21,780	1,100.00	500.00	1,600.00
do.....	{ 1871 1882 }	10	18,150	9,075.00	17,428.00	26,503.00
Furnace.....	1891	8	15,000	9,000.00	26,000.00	35,000.00
do.....	1895	8	20,584	10,000.00	27,562.43	37,562.43
Steam.....	1872	6	7,776	5,100.00	16,000.00	21,100.00
Furnace.....	1890	8	11,588	8,691.00	25,972.00	34,663.00

a Part of Mt. Pleasant school site.

Name.	Location.	Style of building.	Size.	Description.
Eighth division—Continued.				
White (county)—				
Benning	Benning, D. C	Brick	<i>Feet.</i>	Two stories
Anacostia road	Anacostia road	Frame		One story
Congress Heights	Congress Heights, D. C	Brick		Two stories and basement.
Good Hope	Good Hope, D. C	Frame		One story
Van Buren	Jefferson street, Anacostia, D. C	Brick		Two stories and basement.
Van Buren annex	do	do		Three stories
Colored, county—				
Benning Road	Benning Road	Frame		Two stories
Birney	Nichols avenue, Hillsdale, D. C	do		do
Burrville	Burrville, D. C	do		One story
Garfield	Garfield, D. C	do		Two stories
Hillsdale	Nichols avenue, Hillsdale, D. C	do		do
Colored, city—				
High	M street, between 1st street and New Jersey avenue nw.	Brick	80 by 147	Three stories and basement.
Ninth division:				
Briggs	E and 22d streets nw.	do	67 by 83	Two stories and basement.
Garrison	12th, between R and S streets nw.	do	70 by 84	do
Magruder	M, between 16th and 17th streets nw.	do	56 by 104	do
Phillips	N, between 27th and 28th streets nw.	do	70 by 84	do
Stevens	21st, between K and L streets nw.	do		Three stories and basement.
Sumner	M and 17th streets nw.	do	94 by 69	do
Wormley	Prospect avenue, between 33d and 34th streets nw.	do	70 by 84	Two stories and basement.
Tenth division:				
Banneker	3d, between K and L streets nw.	do	81 by 69	do
Douglass	1st and Pierce streets nw.	do		do
Garnet	U and 10 streets nw.	do	90 by 73	Three stories and basement.
John F. Cook	O, between 4th and 5th streets nw.	do	96 by 58	do
Jones	L and 1st streets nw.	do	67 by 83	Two stories and basement.
Logan	3d and G streets ne.	do	70 by 84	do
Patterson	Vermont avenue, near U street nw.	do	70 by 84	do
Slater	P, between North Capitol and 1st streets nw.	do	70 by 84	do

How heated.	When erected.	No. of rooms.	Size of site. <i>Sq. feet.</i>	Value of site.	Cost of building.	Total cost.
Stoves	1883	4	43,560	\$2,178.00	\$8,935.00	\$11,113.00
do	1864	1	43,560	1,310.00	600.00	1,910.00
Furnace	1898	8	10,760	3,320.00	23,000.00	26,320.00
Stoves	1889	2	21,780	750.00	4,462.00	5,212.00
Furnace	1891	8	15,600	25,000.00	24,864.00	49,864.00
Stoves	1881	6	15,600	2,500.00	6,837.00	9,337.00
do	1864	4	21,780	900.00	3,135.00	4,035.00
do	1889	4	43,560	2,500.00	6,926.00	9,426.00
do	{ 1888 1892 }	2	15,000	600.00	2,750.00	3,350.00
do	{ 1887 1896 }	6	43,560	900.00	5,247.60	6,147.00
do	1871	6	41,832	1,700.00	5,000.00	6,700.00
Steam	1890	24	24,591	24,592.00	82,317.00	106,909.00
Furnace	1889	8	9,202	9,500.00	24,619.00	33,119.00
do	1889	8	14,400	16,200.00	24,540.00	40,740.00
do	1887	8	18,469	19,400.00	25,973.00	45,373.00
do	1890	8	13,302	11,400.00	26,066.00	37,466.00
Steam	1868	-----	16,481	16,481.00	40,000.00	56,481.00
do	1871	11	11,984	25,156.00	70,000.00	95,156.00
Furnace	1884	8	13,240	6,600.00	23,495.00	30,095.00
do	1882	8	9,653	10,600.00	20,000.00	30,600.00
do	1896	8	9,600	10,560.00	26,296.00	36,856.00
Steam	1880	12	28,480	22,800.00	35,000.00	57,800.00
Furnace	1868	11	8,640	6,900.00	18,000.00	24,900.00
do	1889	8	14,866	11,100.00	25,396.00	36,496.00
do	1891	8	9,125	8,486.25	26,513.75	35,000.00
do	1893	8	(a)	(a)	26,118.00	26,118.00
do	1890	8	12,000	11,000.00	26,067.00	37,067.00

a Part of Garnet school site.

Name.	Location.	Style of building.	Size.	Description.
			<i>Feet.</i>	
Eleventh division:				
Ambush	L, between 6th and 7th streets sw.	Brick	70 by 84	Two stories and basement.
Anthony Bowen	E and 9th streets sw ..	do	70 by 92½	do
Bell.....	1st, between B and C streets sw.	do	67 by 83	do
Giddings	G, between 3d and 4th streets se.	do	70 by 84	do
Lincoln	2d and C streets se	do	75 by 68	Three stories and basement.
Lovejoy	12th and D streets ne...	do	60 by 35	Two stories and basement.
Payne	15th and C streets se ..	do		do
Randall.....	1st and I streets sw	do	90 by 72	Three stories and basement.
Total				

How heated.	When erected.	No. of rooms.	Size of site. <i>Sq. feet.</i>	Value of site.	Cost of building.	Total cost.
Furnace.....	1889	8	11,000	\$11,750.00	\$23,885.00	\$35,635.00
do.....	1897	8	10,555	10,600.00	27,129.63	37,729.63
do.....	1889	8	11,920	9,536.00	25,609.00	35,145.00
do.....	1887	8	14,376	7,188.00	24,952.00	32,140.00
Steam.....	1871	10	11,600	17,400.00	20,000.00	37,400.00
Stoves.....	1872	6	14,010	5,000.00	10,000.00	15,000.00
Furnace.....	1896	8	8,480	4,240.00	22,695.00	26,935.00
do.....	1876	10	9,088	5,500.00	40,000.00	45,500.00
.....	.....	.....	.....	1,340,923.20	2,964,185.27	4,305,108.47

